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ORIGINAL COMMUNICATIONS

A Simple Panacea for Dental Caries

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ORIGINAL COMMUNICATIONS

A Simple Panacea for Dental Caries

J. SIM WALLACE, D.Sc., L.D.S., M.D., LONDON.

Address before the Academy of Dentistry, Toronto, Jan. 4th, 1927.

The California State Dental Society made arrangements to bring J. Sim Wallace, D.S.C., L.D.S., M.D., London, to America to attend the state meeting. On his way out and on his return trip he is to visit over thirty cities and address dental meetings. Canada is favored at Montreal, Toronto, Winnipeg, Calgary, and Vancouver. In Montreal he discussed the vitamine question and in Toronto the problem of dental caries. By courtesy we publish a report of each meeting. The original papers by agreement belong to the California State Dental Society.

Dr. Wallace began by saying the tooth brush is not a modern instrument and the prohibition of sweets is centuries old. At the outset he wished to pay tribute to three noted American dentists in the field of dental caries. W. D. Miller, G. V. Black and J. Leon Williams. Miller defined dental caries so precisely and described its progress so exactly that there need be no mistaking any other form of tooth destruction for caries. Having defined its pathology he set

about to determine its etiology. He and Black both believed that there was no immunity or vital resistance in enamel. Black said that it made no difference what chemical analysis would show with regard to the amount of calcium content all teeth would decay if the acid of bacteria was present in sufficient quantity and concentration. He also said that molar teeth are by chemical analysis more highly calcified than anterior teeth and yet more than thirty times as susceptible to decay. Dr. Charles Tomes questioned the accuracy of Black's statements and analyzed two sets of teeth, one having many rapid decays and one free from caries and found the calcium content so close that the effect would be negligible.

J. Leon Williams, Dr. Wallace said had shown that although many lower animals and especially monkeys had defective enamels and yet their teeth do not decay while in the wild state. Every dentist has seen what appeared to be perfectly sound teeth decay more rapid-

ly than defective ones. Often syphilitic teeth in the anterior part of the mouth are immune though having little or no enamel and what appear to be good second or third molars decaying rapidly. Enamel has one per cent. of organic matter and is the first to be attacked by the acid of decay loosening the calcific rods. If there is any vital resistance to enamel it surely should be found in the organic cementing substance and yet it is more susceptible than the calcified parts. This means of course there is no resistance to decay in enamel through its vital functions. If the highly calcified inert rods do not decay as readily as the vital part then there is no resistance in enamel.

The dentine with its 28 per cent. of organic matter provides through its tubules a means for the rapid progress of decay rather than any resistance. The granular layer in advance of caries would seem to be a means of resistance to the advance of decay, but there are good reasons for believing that it is a decalcified tissue—as the result of carious acid.

The idea of hereditary dental caries is untenable because acquired characters are not transmitted from one generation to another. There is no good reason for believing that because the parents have dental caries that their offspring will also have decayed teeth. This, Dr. Wallace exemplified from his own family. He himself had lost most of his molars while he was in his teens and his wife spent most of her summer holidays in having her teeth plugged and their son now twenty-five years of age has a full complement of teeth undecayed with normal occlusion.

Dr. Wallace said he held to the chemico-bacterial theory of dental caries as described by Miller and had little patience with the systemic influences as causes of the malady. Fermentable carbo-hydrates, such as

sugars and starches frequently changed after resting will develop an acid which will readily attack the most perfect enamels. There are cellulose and other forms of carbohydrates which are not readily fermentable and serve a useful purpose in cleansing the surfaces of the teeth and gums. Besides these there are bitter, pungent and stimulating foods which serve a good purpose but valueless as nutrition. Soft, sloppy foods should be condemned.

The physiology of deglutition as taught by text books on the subject was entirely wrong. The idea that the saliva is a digestive of starch in the mouth is also wrong. The purpose of the saliva is a detergent. It helps to break up and liquify the food. Foods which have a detergent value are the most efficacious in preventing caries.

Following Miller's discovery of bacteria as the cause of dental caries many attempts were made to control the disease by the use of disinfectant and alkaline mouth washes. All of these failed and then followed the craze of the tooth brush, this also failed.

Dr. Wallace presented statistics to show a decided improvement in the incidence of dental caries in certain sections of England since the war as compared with pre-war periods. This was attributed to less sugar and less milk. It was noticed that there is a greater improvement among the well-to-do than among the poor. This was accounted for by the more rapid distribution of education among the well-to-do.

Samples of dietary which would prevent caries were presented.

Dr. Wallace's views on this matter are the same as those taught for more than two decades. Eat coarse, rough foods, whole wheat bread, vegetables, fruits and proteins as found in meats, fish, eggs and butter, avoiding milk, sugar and starch in fermentable form.

While these foods prevent dental caries and secure a clean mouth they in addition maintain a clear alimentary tract and prevent constipation. In closing Dr. Wallace read a set of rules for public guidance which was prepared for the Department of Health in Shropshire, England.

DISCUSSION

Dr. Seccombe in opening the discussion welcomed the essayist to Canada and said the reduction of dental caries in England was the parallel of what was occurring in Canada. These improvements were not in his opinion all due to the lack of sugar and milk during the period of the war, but more likely to a large extent due to an improved health condition from a better knowledge of the rules of hygiene. Much of the teaching of the young was being reflected back to the parents. His view was that there should be more general instruction in the use of the tooth brush, systematic examinations and frequent visits to the dentist incorporated in the instructions given to the public in the rules read by the essayist. Dr. Seccombe took issue with the essayist on the immunity of the enamel. He said although the chemical analyses of tissues might be alike, there were vital factors of the greatest of importance that could not be shown by such analysis. He said the quality of the teeth changed, from time to time and that the character of the tissues was a reflection of the diet. He also claimed that the development period of the child was of great importance in producing well calcified teeth without pits, fissures, and rough surfaces.

Dr. Allen Brown said he had not known before this evening that oat meal was a patent food. This was indeed strange coming from a Scotchman, as the essayist claimed to be. He laid strong objection to the term, "temporary teeth". It encouraged parents to think such

teeth were of little value. In his opinion teeth were good enough to fill or bad enough to extract. There can be no middle path or occasion where a decayed or diseased tooth should be left in the mouth to be a source of infection. He said that physicians could not cure diseases, they can alleviate the symptoms and suffering of disease and teach correct habits of life. Like the dentist he advised periodic examinations for the prevention of diseases. As a physician he thought about 25 per cent. of dental caries was heredity and 75 per cent. environment. He pointed out the baneful effects of the comfort or as he called it the "plug" which in some baby hospitals is used as such.

Dr. Harold Clark wanted to know what had become of the theory set forth by Dr. Kirk that highly excessive sugar and starch foods caused a return of such soluble parts through the blood to the saliva and thence to the teeth causing caries? He discussed the foods of the primitive races as compared with those of today and pointed out the baneful effects of such fermentable starches as are found in the grains. He also drew attention to what he had often observed, that frequently patients failed to reach the buccal surfaces of upper third molars and a definite line could be seen where dental caries began.

Dr. Wallace closed the discussion in a very happy vain answering all the criticisms in a pointed fashion, but holding most tenaciously to the chemico-bacterial theory of caries and its prevention by a simple dietary regime. Why worry about pits and fissures, defects and drugs, dentifrices and tooth brushes if a diet which is admittedly the best for the general health will effectively prevent caries.

Sugar, Milk and Vitamines

ADDRESS AT MONTREAL OF J. SIM WALLACE, D.Sc., L.D.S., M.D.

Diseases of the teeth in modern civilization were said to be shockingly prevalent, and, in searching for the cause, medical men who advocate milk and cereal diets were singled out for special criticism by J. Sim Wallace, D.Sc., M.D., L.D.S., lecturer on preventive dentistry at King's College Hospital, London, England, who caused a sensation when he came to Montreal yesterday to speak to local dentists.

Forty members of the Montreal Dental Society, who gathered in the Mount Royal Hotel last evening to hear the visiting expert on teeth, stiffened from relaxing positions into tense upright postures, and leaned forward tensely to catch every word, when Dr. Wallace launched into an attack on the medical profession which encourages milk diets for people generally, for prospective mothers, or for children. The speaker also had a lengthy argument to put up against "the vitamine craze."

Dr. Wallace said, in part: "How far the attempt to construe a dietary on a vitamic basis has been carried for the prevention of diseases which hardly ever exist in civilized countries, may be indicated by a recommendation recently given in the editorial columns of a medical paper.

"The subject under discussion was the prevention of dental caries (decay), yet the author of the article maintained that bacon should be omitted from the dietary. There are few foods as excellently adapted for the stimulation of mastication and oral hygiene as bacon and few are equal to it from the point of view of nourishment, energy and heat production. Moreover, flavor or tasti-

ness in a food is not to be despised.

"Another recommendation showing the folly of basing a dietary for children on vitamic constructions is to be seen in the advocacy of milk and cereal food. This amounts to little more than prolonging the age of pap-feedings and the continuity of the shocking prevalence of the diseases of the teeth.

"The children in races like the Maori, in New Zealand, and the aboriginals, in Australia, are never given cow's milk; and cereals, if eaten at all, are but a negligible part of their dietary, yet their teeth are unexcelled by any other race in the world with regard to freedom from caries.

"It is thoroughly well recognized that where a land flows with milk and honey, there you have caries rampant in the classes which guard these foods most, notwithstanding their vitamic content.

"Surely by this time physicians might know that the hygiene of the mouth was not ministered to by milk, bread soaked in milk, milk puddings, and biscuits and milk. These, and other like foods, are examples of what should not be recommended to anyone having the slightest regard for the teeth or oral hygiene.

"It is lamentable to think that medical men are apparently still oblivious of the fact that a child of two and a half years is almost invariably blessed with a full set of most excellent and efficient teeth, and that the craze for vitamines makes them imagine that a milk diet mixed with other highly fermentable carbohydrates can be plastered about the crevices of the

teeth without leading to the destruction of the natural denture.

EFFECT ON TEETH

"In relatively wealthy countries, especially among the well-to-do, the diet of children consists largely of milk, eggs and butter—and their teeth are a disgrace to civilization.

"Vitality is inherent in all living tissues, and vitamins are not required to impart it. They only help to prevent bacteria and their toxins from interfering with vitality. Thus, instead of comparing vitality to the electric spark in a motor engine, we should rather call them 'mortamines' and to see in them the activities which might be attributed to the anti-bacterial or germicidal.

"Except perhaps in the case of scurvy, the role of vitamins is only of academic interest, and, as far as dentists are concerned, of no practical importance whatever. We never see, nor are we required to treat patients either in England or America suffering from beri beri, xerophthalmia rickets, or scurvy, nor are we called upon to give advice with regard to general arrested growth as distinguished from growth of the jaws dependent upon the absence of Vitamin A in the diet.

"Nevertheless, it may be well to review some of the recent speculations and experiments with regard to vitamins and the diseases of the teeth. This is perhaps particularly desirable at present, because in medical circles at least misdirected attention prevents useful investigation with regard to other more important accessory food factors, and the old and fallacious belief that the lack of calcification or the bad quality of the teeth is the cause of the prevalence of caries has been revived."

Dr. Wallace ridiculed the belief that prospective mothers should

make a change in their diet. He declared that they should continue as before. A mixed diet was recommended for everybody.

IDEAS ON DIET

In presenting a series of rules for the prevention of teeth decay, Dr. Wallace particularly objected to the use of bread and marmalade, or bread and jam, as a wind-up to the meal. He said in that way a good meal may be turned into a bad one. The rules included the following:

"Meals should be arranged in such a way that if soft, starchy or sugary food has been eaten, the mouth and teeth will be cleansed by food of a detergent nature taken immediately after.

"Three meals daily are to be preferred to any greater number, as the longer the interval the more hygienic is the state of the mouth and stomach.

"During the first two and a half years of life all starchy or sugary food (except milk) should be given in a firm or fibrous form so as to stimulate mastication and insalivation, and thus to promote the healthy growth of the jaws and the regular arrangement of the teeth.

"Examples of food not cleansing, and liable to induce dental decay are: Sweet biscuits and cake, bread and marmalade, bread and jam, new bread without crust, bread soaked in milk, milk puddings, porridge and milk, preserved fruit, chocolate and sweets of all kinds, honey, liquids, cocoa and chocolate.

"Examples of food cleansing and preventive of dental decay are: Fish, meat, bacon, poultry, uncooked vegetables, lettuce, cress, radish, celery, cooked vegetables to some degree, stale bread with crust, toasted bread of all kinds, twice baked bread."

Diet for Children

ALFRED OWRE, D.M.D., M.D., C.M., B.A.

(Quotation from "*Prunes and Pancakes*")

I believe, with many critics of the age, that nowadays we pay too much attention to our children, or more probably, to our child. But—and I know well that this will be called the absorption of the specialist in his hobby—I also believe that we can hardly pay too much attention to that child's proper diet. Most modern mothers conscientiously follow a doctor's advice on food during the child's infancy and very early childhood. Too often her vigilance relaxes as soon as a child is "on its feet." Several mothers I know regard further attention to diet as a waste of time and effort. The most happy-go-lucky of these remarked to me several years ago, "Oh, where the children are concerned I have absolutely no nerves!" To-day the children concerned have absolutely no digestions. Another of these holds the comfortable belief that a special Providence preserves children from the consequences that normally follow indiscretions of any sort, especially dietetic. Possibly so; but in my observation the absolution is temporary, and the ultimate punishment highly cumulative. On the other hand the reward of careful attention to what children eat and of training in right habits of eating is an unbelievable measure of health and strength.

Proper food, in my experience, goes far toward counteracting the ill effects on our children of modern living, which too often makes of them, as one child specialist put it, "a pretty jumpy lot." I have brought up two, on the system I shall give later, to the ages of ten and seven,

without either one's contracting a single serious illness nor many minor ones. Both children are of good constitution, though not exceptionally so. Both have gone since the age of five to the public schools. They have contracted from time to time some of the various ailments that so frequently sweep those institutions; but as yet they have never been alarmingly ill with any of them, nor—and this, nowadays, is exceptional—have they had any of the often serious after-complications that diseases like the "flu" so frequently entail. Both children "throw off" illness, practically without the use of medicines, very quickly and completely. For instance, one child, during an epidemic of an ear infection which in a dozen cases I know of developed into serious mastoid trouble, "came down" with an abscessed ear. There were the usual symptoms—a fever, earache, and finally a "running" ear. The specialist, a family friend, and no alarmist, watched it carefully for sinister developments, warning us that the utmost care was necessary. In a week, however, the abscess had healed. The child was kept from school another week, for fear the infection might have spread, but there was no further disturbance of any sort. The doctor volunteered that no other case under his notice had made as quick and thorough a recovery. About that time two children in a friend's family, both normally healthy to all appearances, contracted mastoid disease after such an abscess and died. Several other children of our

acquaintance, as well as various adults, spent weeks of agony, followed in three cases by a series of operations. To cite another instance, both children have twice succumbed to epidemics of a virulent "flu." The first attack was toward the end of the war, when the disease had taken its frightful toll of lives all over the world. The children were very young—twenty months and four and one-half years. We parents, whose philosophy deserts us basely in a crisis, were as frightened as any lay parents, and the doctor did not minimize the danger. Ordinarily inclined to make light of their illnesses, he insisted this time on the strictest care, and made frequent calls. In five days, however, the fever was gone and they were clamoring for three or more meals a day. After two days of enforced rest they were up and about as usual. The second attack four years later had an even shorter history. Another time the elder child, who is the less hardy, came home with the mumps. Though her face swelled balloon-wise she missed no meals; a heightened irritability for a day or two was the only other sign of illness. The boy was with her all the time, but did not "catch" it. Both children, considering the climate, have surprisingly few colds. The past year and a half each child has had only one. I could go on citing instances, but will spare the reader. The point of all this is that through a proper diet they have developed an unusually **high resistance to disease**. And this, I maintain, is of the most importance. It is the simple ounce of prevention returned a thousand fold. Medical science—or the part of it which thinks—is in despair over the fact that as soon as one disease is vanquished by its serums, vaccines or what-not, five other new diseases spring up, like the dragon's teeth, to flaunt it. Perhaps—I humbly submit—the straight and narrow path

of a reformed diet is the way out. I have tried to show that proper food is all important in building up a good resistance to disease. Let me cite a first-hand instance of how, with children at least, the same system not only prevents but cures. Five years ago, owing to a death in the family, we had two young relatives of six and a half and four in the household for a year. One child suffered from chronic constipation. She was inordinately fond of sweets. When she reached us, after a trying journey on which she had been nearly killed by kindness, she was ill with a fever for three days due to a severe stoppage of the bowels. When this was overcome, she was placed on the diet of the other children (I shall outline it shortly) and induced, with many bribes, to give up all sweets except a tidbit once a day with her dinner. In a week there was a great improvement. In a month the child was in better health than she had ever been. No laxatives were ever needed nor have they been since. An interesting corollary of this is that the youngster after six months of this diet, lost her passion for sweets. It has not returned. She consistently refuses desserts, even the candies and cakes for which she used to beg. That year in which we had four children from two to six and a half on the dietary program conclusively proved to me the efficacy of that system. Three of them were in school every day; yet they hardly had a cold among them, and they contracted only one disease, the whooping cough, and this in mild form. These two young relatives, with a younger sister, have been fed, since they left us, on the same plan; and none of the three—now eleven, eight, and six—has had a serious illness nor a minor ailment more alarming than the chicken pox.

To be most effective, attention to a child's diet should begin as early

as possible in the prenatal period. An expectant mother should take especial pains to eat proper food, in justice not only to herself, but to her child. The child's start at birth depends greatly on this and the mother's ability to nurse her baby also hinges largely on her diet. In a following chapter I shall give a section to diet during pregnancy. Now I shall take up in detail a child's diet from birth.

It is widely known that those infants have incomparably the best chance for life, as well as the best chance in life, who are breast fed. This will bear any amount of emphasis, however. Breast feeding, when the milk is normal, affords resistance to disease; combined with ordinary hygienic care, it insures against practically all digestive disorders, so common to artificially fed infants; and—a less widely known fact—it has a marked effect on the future proper development of the child's teeth. If a normal child can be breast fed for six months and gradually weaned, at nine or ten months it should be "on its feet" without any transitional difficulties whatever. In my observation weaning a healthy child need not be the fearsome business it is so often thought to be.

A normal child is best fed, from the start, at four-hour intervals, with one night feeding between 6.00 p.m. and 6.00 a.m. until it fails to demand a night feeding. At three months a few teaspoons of orange juice should be given three hours after a feeding. Soon this may be given twice a day with good results. Sterilized, cool water should be offered two or three hours after the other feedings.

If a mother's milk supply remains adequate, artificial feeding should not ordinarily begin until the child is about six months old. Then one breast feeding may be supplanted by a mixture of whole, preferably certified, milk and barley water in

the proportions the child is able to take. This should be given from a cup, with a spoon. The usual fuss with bottles is unnecessary. Gradually the amount of milk may be increased until the child is drinking it undiluted. Soon a second artificial feeding may be given. At eight or nine months the child may have a few spoonfuls of unsweetened well-cooked oatmeal at one feeding, a piece of whole wheat toast at another, and a few teaspoons of scraped raw apple or unsweetened prune pulp at a third. He should now eat only four times a day. At the age of a year the following schedule is successful. The hours given are of course arbitrary! it is important, however, to keep as close as possible to a four-hour interval between feedings.

Child's Meals at One Year of Age
6.00 a.m.

2/3 cup whole milk

Small dish unseasoned oatmeal,
with part of the milk over it

3 or 4 prunes with skins and pits
removed

10.00 a.m.

2/3 cup whole milk

Slice of light rye bread

Fresh scraped apple, or orange cut
in sections with seeds removed

2.00 p.m.

Same meal as the ten o'clock

6.00 p.m.

2/3 cup whole milk

Slice of light rye bread

Two or three tablespoons of fresh
cooked vegetable put through a
sieve. Carrots and spinach are
the staples.

Twice a day a liberal drink of slightly diluted orange juice should be given. Certified milk should be used whenever it is obtainable; good pasteurized milk is next best.

A child of eighteen months may be given a coddled egg at the two

o'clock meal, i.e., an egg that has been dropped, with the shell on, into water just off the boil, and left for five minutes. At supper part of a mealy baked potato with butter may replace the rye bread.

At twenty months a child can safely be placed on a three-meal schedule. As his appetite increases he may be given a little more of each kind of food. It is most important that the balance be kept; most young children are given too much cereal and too little fresh fruit and vegetables. Further, a child should be given no food whatever between meals or at bedtime. The digestive systems of children require all the rest they can get between regular feedings; and the smallest morsel of food sets the entire apparatus in motion, to remain active until that food is digested. "Only a cookie" or only a "little cracker" do an incalculable amount of harm to children. They should be taught from the first to adhere strictly to meal times. If children complain of being hungry—though in my observation they seldom do unless food is left within sight or reach—a drink of orange juice or some other simple fruit juice will usually satisfy them, if they have not been encouraged to "piece."

A word here to those mothers who say, "But my child doesn't like milk," or "I can't get Sally to eat vegetables." This, by the way, is seldom true of normal very young children. Ordinarily, if fed out of sight of food they should not have, they are delighted with their meals. If not, and there is nothing wrong with either the child or the food, it should have what is offered or nothing. A little starvation will do no harm; but indulgence in wrong foods will do a vast amount. Firmness is the only kindly course. As children grow older this is doubly true. They are uncannily quick at sensing hesitation; and they seize

the weakest moment to press their point. From every point of view it is unwise to yield, or to show any concern or nervousness. One mother told me her experience with a "finicky" child of three. The boy had been ill a great deal, and had naturally grown unreasonable. He refused foods he disliked — including the vegetables and fruit—and clamored for white bread and sweets. Coaxing and even bribing were of no avail. The boy saw his mother's concern over his failure to eat heartily, and for months took advantage of it to have his own way. At last he became so constipated that his mother realized he must be made to eat differently. She took herself vigorously in hand. Food was offered, one course at a time, and if the boy refused it was quietly removed with the remark, made with no trace of the nervousness and anxiety she felt, "But if you don't eat this of course you can't have anything else." For days it was a battle royal. But the boy finally gave in, and now eats everything set before him without question. The secret of her victory the mother believes, lay in assuming complete indifference—in putting it up to the child. The art of maintaining it consists in assuming that he will eat what she puts before him. If she gives him much choice, or shows anxiety that he eat a particular dish, he grows "fussy" again.

The difficulty in keeping children of school age from eating between meals is not so simply met. They can be appealed to on various grounds, however. A girl will often refrain out of consideration for her teeth and her complexion, a boy from a desire to be the strongest of the "gang." It can be made a point of honor, too, not to eat proffered tid-bits till mealtime. A reasonably fastidious child will then often reject the sticky, arsenical-looking candy or sulphur-yellow bakery cake in

favor of a more appetizing dessert. An effort to give children what they like at mealtimes, in wholesome forms, is well repaid. They are often more reasonable in such matters than we give them credit for being.

But to return to our knitting. A child of two should be well established on three meals a day. The following dietary I have found completely satisfactory. At first sight this may seem to contain an impossibly large allowance of fruits. It is the actual dietary, however, of a child now seven years old, in perfect health, and extraordinarily strong and active, both mentally and physically. Only twice in five years has a laxative or any other medicine been required. The child has had the keenest appetite, always eating with a relish which has made it a delight to feed him.

Child's Meals at Two Years Old

Breakfast:

5 to 10 carefully cleaned and pitted dates. (Boiling water poured over them both sterilizes and helps to clean them. Some mothers prefer to steam them after cleansing them.)

2/3 cup milk

Light rye bread and butter
or

2 tablespoons oatmeal, milk (no sugar)

A few stewed prunes or one or two slices of canned pineapple

A small oatmeal cooky, if called for.

Lunch:

One good-sized apple, pared and quartered

1 cup milk

Coddled egg over a little whole wheat bread, crumbled

Slice of whole wheat bread and butter

Supper:

One large apple, prepared as for lunch

1 cup milk

2 heaping tablespoons cooked vegetable with a little butter or cream

Whole wheat or light rye bread, butter

Celery or lettuce

A slice of canned pineapple if desired, or stewed fruit

The equivalent bulk of other fresh fruits in season, especially peaches, pears, and apricots, may be substituted for the ever-present apple. Fortunately, however, the apple is a much-liked fruit. Whenever it is listed, it should be of good size—perhaps 126 to the box. The zest for it apparently never wanes. With a child of two, berries and other highly acid fruits should be tried very sparingly, perhaps avoided. A year or so later they can be used more freely.

This dietary, practically unmodified except as proportionately larger amounts of the various foods are needed, can be continued for three years. Then the following schedule can be safely followed for another year or two.

Child's Meals at Five Years of Age

Breakfast:

1 apple, cleaned

1 carefully cleaned sun-dried fig, unsulphured and unsweetened

5 to 10 large dates with cream

or

Oatmeal and cream

½ cup milk

Lunch:

1 apple, 1 or 2 figs

1 cup milk

1 coddled egg

Lettuce or celery. A simple French dressing of olive oil and lemon juice (not vinegar) and a little salt may be sprinkled on the lettuce if it is liked

Ry-Krisp* and butter

1 piece pure candy or other small dessert occasionally. I do not recommend this use of candy; but

if the child must have sweets it had best be at mealtime.

Supper:

1 apple or other fresh fruit

1 or 2 figs

1 cup milk

Whole wheat or coarse rye bread, butter

3 tablespoons cooked vegetable

A little boiled unpolished rice, with butter

or

Part of a mealy baked potato with butter

Stewed fruit, slightly sweetened
A small cooky, if desired, not too rich

*This is a Swedish process health bread, obtainable in larger centres throughout the country. It is highly palatable, though it contains only whole rye, water, and salt. It is excellent not only for the digestion but for the developing teeth of children. (I hasten to state that I have no financial interest whatever in this product, nor in any other.)

(To Be Continued)

Destroying the Pulps of Teeth

W. GEO. BEERS, EDITOR CANADA JOURNAL OF DENTAL SCIENCE AND THE
DOMINION DENTAL JOURNAL, 1870

When it is absolutely necessary to destroy the vitality of the pulp of an incisor cuspid or bicuspide previous to filling I prefer to do it by immediate extirpation with an instrument if possible rather than by means of arsenic. Anyone acquainted in the smallest degree with the anatomical and physiological character of the tooth structure and adjacent parts must admit the occasional tendency of such poisons as arsenic to be absorbed beyond the particular point for which they are intended; and

also the risk one runs in using it at all in the highly vascular teeth of children and where the full development of the fang may not have been an accomplished fact.

(Editor) This was good practice in 1870 and so it is today. It would be well for us all to ponder over many of the practices of the past decades. Note what teeth are not treated with arsenic and those which are. Note also the fact that arsenic is not suited for teeth whose root ends are not yet fully calcified.

Facing the Setting Sun

MARK G. McELHINNEY, D.D.S., OTTAWA, CAN.

It had been my intention for some years past to set down in writing some of the memories of forty years ago when I, more by chance than by choice, started out to become a dentist.

Nothing had come out of this intention until the recent passing of three of my class-mates awakened me to the fact that if anything were to be done it were better done quickly, peradventure, I too might pass to that place where typewriters are not available.

The three referred to were R. J. McLaughlin of Toronto, Stanley Burns of Montreal and J. F. Simpson of Trenton. The last two were house-mates of mine in our final year.

Of the thirty who made up the graduating class of '90 nearly half have passed on. Owing to the loss of the class picture in a fire I have been unable to keep track of all of the men but am aware that W. R. Hamilton, A. T. Pearson, J. J. Wisser, D. Dulmage and C. M. French are also gone.

The outlook on life at sixty is different from that at twenty-one. As I look back there come many memories, some happy, some saddening, but to regret is futile. Youth is great and it is worth while.

Only those who misinterpret life can call youth foolish. Youth is wise through its ignorance. Did it know it might not dare to carry on. Youth in its health, its energy, its virility, goes forth with hope and courage to conquer its world; therein is its greatness.

When I think of all of those fine fellows who were my class-

mates in the old college on Louisa Street, I rejoice that it was my privilege to know them and to be one of them.

The personnel of a college is a cross section of life revealing the tones and shades of character common to its formation.

We had men from the big cities, from the small towns and from the country. We had men who knew the luxuries of life and men to whom poverty was no stranger. We had men whose fathers paid their way as mine did and men who heroically worked their own way.

We had men who had travelled and seen somewhat of the world and men to whom twenty miles was a journey.

We had men who had read widely for their years and men who never read a book not necessary to graduation.

We had men like Thornton, now Dean of McGill Dental Department, who could hold an audience spell-bound and men who were inarticulate. We had men like Oliver Martin, our Gold Medalist, mechanically expert, and men whose fingers were all thumbs.

We had a half dozen or more philosophers who kept the old laboratory ringing with their disputations and we had men whose thinking capacity was extremely limited.

We had athletes, fighters, poets and musicians, in fact, we might have reconstructed a world. That is youth, that some would some day meet the grim tragedy of failure was hidden from us.

Back in the old puritan days of New England when the literary out-

put was mostly religious, someone wrote a book called "The Future Mercifully Concealed". In modern slang, he said a mouthful.

When I think of the tragedy that engulfed some of my class-mates, I recall the remark of John Bunyan when passing a gibbet whereon hung a malefactor,—“But for the grace of God, that were John Bunyan.” Being one of the half-dozen philosophers before mentioned, I know nothing of the grace of God but I do know that the underlying philosophy of Bunyan’s remark was true.

Speaking of Bunyan, “The Pilgrim’s Progress” is one of my favorite books. I have read it again and again. It is couched in Christian terms because Bunyan was a Christian but it is none the less an exposition of universal truth. It is a truth which should clothe us with a certain humility and give us a wide charity for those who have fallen by the wayside.

To return to our muttons. In 1886, I started to study Dentistry with Dr. John Robertson of Ottawa, now deceased, and I am thankful to whatever gods there be for my good fortune in the choice of a preceptor. Doctor Robertson was a man of high ideals and exemplary life.

He was a staunch Scotch Presbyterian, the faith in which I was raised but departed therefrom, nevertheless, I would not like to see the breed depart from the Earth. It was a hard creed but it bred men.

This was in the days of the two and a half years indentures with two terms at college. In October, 1888, I went to Toronto for my first term. It was my first time in Toronto of which I had heard much.

A big city was no novelty to me for obvious reasons. My father was a Nova Scotia sea-captain who, in 1883, was appointed Nautical Advisor and Marine Architect to the Dominion Government. I was born in 1867 and my first conscious ex-

perience of life was on board a full-rigged ship somewhere on the Atlantic, I was around four years old and we were bound for Liverpool, Eng. That is as far back as I can remember. I knew the ways of a ship long before I knew about a house ashore. When I was five I came ashore to go to school in Truro, Nova Scotia where we had a home. During the winter of 76-77 I went to school in Montreal; first a private school and then to an Anglican Church school located in the basement of St. George’s church which is opposite the present C. P. R. Windsor Street Station.

In 1877 my father quit sails and took to steam as master of the S. S. Alhambra of the Cronwell line and from that time to 1882 I spent my holidays on the North Atlantic. Do you wonder that I was sometimes impatient with some of my classmates who thought twenty miles a journey?

New York was one of our ports of call and besides I had a great uncle there who was reputed to be wealthy. My first visit was my first introduction to real luxury. I had always been well-fed, well-clothed and happy, but this was my first introduction to what real money could buy. A Nova Scotia skipper was rich on a hundred a month with quarters on board for his family and board and uniforms supplied. In the old days the ship-owners were very liberal when compared with modern standards.

This may seem to be irrelevant but it is not so. It helps to explain my reactions to the experiences of my first year in Toronto. I was utterly alien to these fresh-water people.

To write truly, to write so that the writing can have some value, it is necessary to tell the truth.

Coming to Toronto with a cosmopolitan outlook, a charity towards all differences of opinion, I found Toronto very provincial, in truth, an

overgrown village. It is different now but I am speaking of forty years ago.

Of course, I had much to learn, much that Toronto could teach me. I did not know that at the time, I have found it out since. I remember my first search for lodgings. I had never lived in lodgings. Hotels I knew but lodgings not. My good friend, Dr. Geo. Matthewman, with whom I had gone to the Collegiate in Ottawa was a senior and he gave me some pointers.

Eventually, I landed on George Street and thereby hangs a tale that better not be told unless my good friend, the editor of the Dominion Dental Journal, will ensure that it will pass the censors.

Remember, I was an innocent youth and not the sophisticated sinner that I am today.

I remained there until the Christmas holidays. I was the only Dent in the house. There were several Vets, one English remittance man, a book-agent and others not specified. It was a warm and comfortable place and I might have remained if there had not been a certain freedom of action in the matter of morals which grated upon my strict upbringing.

There was one Ottawa man at the Veterinary College, W. G. E. Austin (Billy, to his friends and a terror to his enemies) and through him I became acquainted with a bunch of Vets. Amongst them, I met a man who was afterward to become of some account in Canadian politics. I refer to Doctor Tolmie of B. C. He was a good head and an efficient boxer. I did not meet him again until some thirty years after when he came to Ottawa as Minister of Agriculture in the Union Government and gave an address at the University Club.

I did not even remember his name as we had simply called him "B.C." Something in the set of his shoulders

and the way he clipped his words seemed familiar. I remarked to Doctor Grisdale who sat next to me, that I had surely met that man somewhere and after getting the necessary information, located my man.

After the address, I approached Doctor Tolmie and asked him if he knew me. Evidently, he did not recognize me with my snowy hair.

I do not blame him for that. I said, "Do you remember a little red-headed chap who used to knock around with Billy Austin, Lade and yourself in Toronto in the late 80's?"

"I sure do, you're Mac," and that cleared things up.

And now Tolmie may be premier of B. C. which is good for B. C. but a distinct loss to Federal politics for he is a fearless straight-shooter. Out of the contests of college life there arise many things of prime interest in later life.

The old college on Louisa Street was a poor affair from a material standpoint compared with our present quarters but it held some things beyond compare. We had J. B. Willmott as Dean, one of the grandest men into whom the gods ever breathed the breath of life. We had Luke Teskey and we had W. T. Stuart, and I never knew better men. In my sixty years I have never known a more honest man than J. Branston Willmott. He knew no evil.

If Dentistry is an honored profession today in Ontario, it is due to the initial efforts of J. B. Willmott.

There were others; those of us who sat under doctors Teskey and Stewart cannot forget the wholeheartedness of their teaching.

Teskey would come into the lecture-room with his cuffs covered with blood. "Gentlemen, I have just come from a confinement case but that has nothing to do with our present business."

"Our present subject is gun-shot wounds in the face involving the dental area."

In the winter of 1889-90 I had La Grippe and well nigh died. Theophilis Stewart sat all night at my

bedside and pulled me through.

I was too far gone to care but he knew his business. Do you wonder that I have a kindly and thankful feeling for the old college on Louisa Street?

Bacteria in Relation to Enamel Fissures

CHARLES F. BODECKER, D.D.S., F.A.C.D., (PROFESSOR OF DENTAL HISTOLOGY AND EMBRYOLOGY, COLUMBIA UNIVERSITY DENTAL SCHOOL, NEW YORK, N. Y.)

Bacteria and food debris are doubtlessly instrumental in the destruction of the teeth, even though there are still some factors missing for the thorough comprehension of the phenomenon of dental caries. If bacteria, therefore, are considered as one of the irritating causes of caries, it follows that wherever these lodge, destruction of the dental tissues may take place. Consequently it is of interest to show the relation of the size of bacteria to that of the fissures and crevasses of the teeth.

Dr. T. P. Hyatt called my attention to a quotation of Dr. A. E. Webster's in Johnson's Operative Dentistry (p. 172): "If every operator had the opportunity of seeing the micro-organisms of decay under a microscope and then seeing the width of the finest fissure under the same power, there would be no doubt in his mind as to what should be done". As it is impossible to photograph the entire width of even the narrowest fissure under an enlargement which will make the bacterial contents visible, the two accompanying diagrams were drawn.

Figure 1 shows a section through the crown of a molar with an incomplete fissure. (The incomplete fissure, as mentioned elsewhere* is a fault in the enamel that does not reach to the dentine, but has an area

of sound enamel separating it from the dento-enamel junction). The tiny area at the base of this fissure in Figure 1 marked "X" has been enlarged 1,000 times and is shown in Figure 2.

In order to ascertain the exact width of small fissures, ten samples of the most minute type were selected. These varied in width between 0.07 and 0.26 millimeters. Such dimensions may not seem small to those not conversant with the metric system, but the following comparisons will show the minuteness of these figures. The Darby explorer, commonly used as probe to diagnose fissures, is 0.24 mm. thick when measured one millimeter from its point; a fine tooth brush bristle is 0.17 mm. thick; a fine scalp hair is 0.06—0.07 mm. thick. These comparisons are added in order to show the minuteness of the fissures and also that no common sized grooves were selected for this purpose.

The size of cocci on the other hand, varies according to Zinsser, from 0.15 to 2.0 microns, or expressed in fractions of a millimeter: 0.00015 to 0.002 mm.

The size of the bacteria in figure 2 is drawn in exact relation to the size of one of the smallest fissures under an enlargement of 1,000 dia-

*Bodecker, C. F. Microscopic Study of Enamel Fissures with Reference to their Operative Treatment.

meters. This shows 0.0005 mm. (0.5 micron) bacteria as 0.05 mm. dots, and the width of the fissure (0.07 mm.) as 70 millimeters wide.

The bacteria are drawn as being loosely scattered throughout the fissure; that is, however, not the case in the mouth for they are usually closely packed, intermingled with food debris and mucin, making up the well-known bacterial plaques. If the proper number has been sketched into the diagram, only a solid mass would be seen and no conception given as to the minuteness of the bacteria in relation to the fissure.

To estimate the approximate number of bacteria which may and always do lodge in fissures, is a simple matter. I do so, not with a wish to be dramatic, but with the intention to prove to both dentist and patient why 99 out of every 100 fissures decay.

For the purpose of this count, let us take an exceedingly narrow fissure:—

wide	0.07 mm.
long	5.0 mm.
deep	1.0 mm.

This minute cleft can be packed with 2,800,000,000 averaged sized cocci of 0.05 microns.

A slightly larger fissure, but one still narrower than the finest tooth brush bristle of 0.17 mm.:

wide	0.14 mm.
long	5.0 mm.
deep	1.5 mm.

would harbor 8,400,000,000 cocci!

If we take into account that caries soon widens the base of the fissure to ten times its original width without opening the entrance, we realize that the average mesio-distal fissure in a lower first molar, contains far over 5,000,000,000 germs, one year after the eruption of the tooth. And this enormous number would only half fill a slightly enlarged, carious fissure, the rest of the space being taken up with food debris and mucin.

We speak glibly of millions and billions and yet these figures are really beyond our comprehension. Let me illustrate by the following example: Suppose that a person coughs without holding a handkerchief before the open mouth and during each second of coughing, one thousand bacteria were expelled. How long would it take till 5,000,000,000 bacteria passed out of the mouth? It would take over 66 days—that is over two months, bacteria passing out of the mouth, day and night at the rate of 1,000 per second. This gives us some idea of the number of bacteria harbored in an averaged sized fissure.

Before the tooth erupts, there are no bacteria present in the fissures; they are filled with the remnants of the non-calcified enamel organ. This, however, soon disappears to a great extent and food takes its place. Then, as the bacteria digest this food debris, the fissure becomes clogged with the bacterial plaques. The conditions under which the bacteria are harbored in fissures are ideal for their growth for they have warmth, moisture and food, being at the same time, shielded against being dislodged. Under these favorable circumstances, it is not surprising that they multiply with great rapidity and as the fissure is soon filled with bacteria, the new growth of germs is forced to pass into the mouth. We may, therefore, regard fissures as ideal breeding places for germs.

Patients will be shocked to think of the number of bacteria securely lodged in the depths of minute fissures and will insist on having them eradicated or filled. Let me say, however, in order not to exaggerate this phase of the question, that the average mouth harbors even more germs in the approximal spaces of the teeth and the gingival crevices. But there is one difference; these areas are mostly accessible to the tooth brush and floss silk and can

thus be kept clean by a conscientious patient, whereas the minute fissures described above can not be cleansed by either mechanical means or sterilized by the usual mouth washes or dentifrices.

From the foregoing description of the conditions of fissures, we comprehend the danger lurking in their depths. No groove, no crevice, **if it is not self-cleansing**, is too small to lodge bacteria and food and thus be

a menace to the integrity of the tooth.

Consequently, all retentive, carious or non-carious fissures should receive the earliest possible attention of the dentist, soon after the eruption of each tooth, to prevent the penetration of dental caries into its depths.

331—7th Avenue,
Pelham, New York.
August 3rd, 1926.

Dr. Mave's Paper at the Montreal Clinic

Dr. Mave's paper dealt with retroactive dentistry and in this, while discussing technical methods at some length, he digressed from time to time to stress what he thought should be the attitude of the dentist toward his work. Many of the diseases of the mouth, he said, could be cured by expert dentistry, and faulty dentistry could likewise aggravate many of these diseases. It was for this reason, he said, that it was necessary first to consider the health of the underlying tissue of the teeth before attempting to do repair work on the teeth themselves. Too often, he complained, the dentist saw only

the obvious things in the mouth, and tried to repair only those defects which were visible. Dentistry, he said, in closing, must be adapted to the needs of the individual and not to some nebulous ideal or some dental principle which could not find its application in every case. By this, he added, he meant that a dentist, in treating a patient, should not try to make the latter's teeth conform to a set standard or to some form which the dentist thought to be the right one; every effort should be made to study the needs of the individual and adapt all repair work to the satisfaction of these needs.

SOCIETIES

The Dental Society of Western Canada

OFFICERS AND COMMITTEES

President—Dr. E. Doyle, Calgary;

Vice-Presidents—Dr. Harry Garvin, Winnipeg; Dr. Geo. Cameron, Swift Current.

Treasurer—Dr. Manly Bowles, Winnipeg.

Gen. Secretary—Dr. P. W. Winthrop, Saskatoon.

PRELIMINARY ANNOUNCEMENT

Recognizing that no part of human activity has ever amounted to anything unless well organized, and dentistry proving no exception to the rule, the dentists of the Atlantic, Eastern and Pacific portions of Canada have been drawn together by strong mutually helpful Associations. Through natural obstacles the dentists of the Western Prairie Provinces, numbering in all over 600 practitioners, found themselves in unfavorable geographical relationship with the other parts of the Dominion. Long distances had to be covered at considerable expense to obtain dental knowledge. To remedy this condition, through praiseworthy effort and hard work, the Winnipeg Dental Society in 1925 initiated a movement to bring back to life the defunct Western Canada Dental Association, which in two years' time has come to include the solid block of Manitoba, Saskatchewan and Alberta, under a workable constitution, with financial backing from all three Provinces.

It is the privilege of the Edmonton Dental Society to arrange the first programme embracing all three of these Provinces. This convention will be held in Edmonton, Alberta, on May 25, 26 and 27th, 1927. The heads of the committees are hard at

work selecting and securing the foremost in demonstrators and clinicians. To put this new and necessary dental organization on its feet, all that we need is a good attendance. As 1927 is an off year for conventions, and the time we have selected is a good one for a motor trip, we feel that we have an exceptionally good opportunity to present our material to you.

We greatly desire to have you lay plans to support your own organization. We suggest that you take this chance of motoring up here, and use your car to see our city and points of interest near by. In this way you can best obtain knowledge of this country which has everything for prosperity, and come into personal contact with our local men of your own profession who are anxious to meet you. Just mark off those dates on your book before you forget, and we will keep you informed as to our progress.

LESLIE McINTYRE,

Chairman of Publicity.

Volunteer clinicians please forward your names and the subjects you wish to demonstrate.

THE ALBERTA DENTAL ASSOCIATION

We much regret having to report that Mrs. W. R. Wilkinson has recently passed away. Dr. W. R. Wilkinson accompanied the body east where interment took place at the old home in Kitchener, Ont.

A banquet of the dental association was held in the Board of Trade, Calgary, Nov. 12, 1926.

The New York Society of Orthodontists

The midwinter meeting of the New York Society of Orthodontists was held in the Vanderbilt Hotel, New York, December 8th, 1926. The program consisted of practical demonstrations and short talks on live topics. The first was a table demonstration on bending wire by Dr. Delabarre, Boston.

DEFINITIONS

1. A straight wire lies in an infinite number of planes, all of which have a common axis in the wire.
2. Any straight wire lies in at least two planes.
3. Two straight wires that cross can lie in only one plane.
4. The horizontal plane is chosen from all these planes as the "Basic Plane" in wire bending. All other planes are to be visualized in their relation to the basic plane.
5. The bending point of a wire is that point at which it is desired to change the direction of the wire.
6. That part of the wire already adjusted up to the bending point is called the "Wire at Rest".
7. That part of the wire on the other side of the bending point is called the "Free End".

RULES

1. To bend the free end of a wire, and deliver it in the same plane, the pliers should be held perpendicular to that plane.
2. To bend the free end of a wire into a plane of the third dimension, the pliers must be held perpendicular to that chosen plane, which plane must be that plane which also contains the wire at rest.

INTERFERENCES

Dr. Delabarre gave a short talk on interference with orthodontic treat-

ment by wilful action of the patient or others. 15 per cent. of all interference is wilful and 17½ per cent. accidental, on failure of the dentist to make proper technical operations. 50 per cent. of all interference is caused by 5 per cent. of the patients. Before treatment is begun the tractability of the patient must be judged and the co-operation of the family secured. The speaker conveyed the idea that even though he received an additional fee for the patient's interference it wasn't satisfactory because of disappointment and loss of reputation because of delay. Better never to have accepted the case.

Dr. John V. Mershon, Philadelphia, demonstrated how to take a modelling compound impression for working models but not as record models. Dr. Eby of New York, described a method of mixing equal parts of white compound made by the Dental Mfg. Co., London, England, with S. S. White black compound Hall formula together for taking impressions for permanent records or working models.

Dr. Laurie Porter, New York city, demonstrated making of plaster models in a model former. It would seem to be a great improvement over the common method in use. There is no art in it, just a mechanical procedure that anyone can follow.

Dr. Kennedy demonstrated how to set models in anatomical articulators to study the occlusion. His view is that such study models should be kept as reference and that an orthodontic case should not be considered complete until it can be proofed up on an articulator.

Dr. A. S. Downing Banqueted

Dr. Augustus S. Downing, A.B., A.M., LL.D., Ph.D., L.H.D., Deputy Commissioner New York State Department of Education was banqueted at the Commodore Hotel, December 10th, 1926, by the professions of Law, Medicine, Homeopathy, Osteopathy, Dentistry, Pharmacy, Nursing, Optometry, Veterinary and teaching.

Augustus S. Downing's influence on the American professions may be chronologically tabulated by recording the dates of passage of Legislative Acts elevating the standards of professional practice.

Pharmacy	1910
Veterinary Medicine	1915
Dentistry	1915
Optometry	1917
Nursing	1920
Engineering and Land Surveying	1920
Architecture	1922
Pediatrics	1922
Medicine	1926

Men such as this one constitute the true life-blood of America, elevating and upholding it, fortifying and ennobling it, shedding glory over it by the example of life and character, the very salt of this earth.

A Modern School Dental Service

A modern School Dental Service should provide for the children of pre-school age. Every child should be placed under the care of the dentist when two years of age. The deciduous or first teeth must be preserved. They serve the child during the period of greatest development and when lost or diseased the child's growth is hindered. Many children's ailments are caused by infection from diseased roots and inflamed gums, and conditions thus developed often continue throughout adult life.

For the purpose of bringing to the attention of the proper authorities and the general public the value of a school dental service we are organizing a province-wide dental survey. The dentists are giving their time gratuitously for the initial dental examination, and the department is supplying the necessary material, so that the inspection can be conducted

entirely without cost to the municipality.

Such a survey has many advantages. Notification cards showing the condition of the children's mouths are sent to the parents, and a large proportion provide the necessary treatment. Local statistics are tabulated and thus give the authorities an accurate idea of the extent of the problem and the cost of its solution. The examination creates a general interest in health matters and causes the people to more seriously consider their responsibility to the children and their duty to themselves. This survey may be obtained by any municipality in the province.

2nd. The second method by which we hope to carry the advantages of dental treatment to the people is through the Hospital Dental Department. There are thousands of people who need dental attention but can-

not afford to have the work done. Dentistry is not a luxury; it is an absolute necessity; yet as at present organized, it is impossible for many people to pay the necessary fees. Something must be done, and the hospital department provides one solution. Wherever the hospital authorities are willing to provide the equipment and supplies, the members of the profession will give their time gratuitously to man the clinic. The Western Hospital, Toronto, is now operating a three-chair dental clinic in a most successful manner, and it is confidently expected that many others in the larger centres will take advantage of this efficient form of service.

3rd. The third activity is the industrial or factory clinic. This form of dental service is very popular in some parts of the United States and should prove most successful here. During the last one hundred years we have been busy perfecting the inanimate machine. During the next one hundred years our time will be occupied in perfecting the human machine. Every factory employee loses on an average eight days through sickness, and many times that number of days through inefficiency caused by defects and infection. We all know how factories are organized for effective work. The machines are kept in perfect order, oiled, cleaned, and every part adjusted. How very important it is then that the man who runs the machine should also be efficient. Moreover, it appears to be rather foolish to spend much time and money on a school service to remove defects and teach the children good health habits and then to entirely neglect them

when they go into adult life.

4th. The fourth consideration has to do with the problem of a dental service in all parts of the province. There are some districts where the people are able to pay for the dental treatment but are far removed from a resident dentist, and they hesitate to spend their time and money travelling to and from the nearest large centre. For many such communities the itinerant dentist and the travelling clinic is the only solution, and a number of these services are now being organized.

The great requisite for character development is right thinking. The pupil who continually suffers pain and is handicapped by physical defects has thoughts that are morose, gloomy and sullen, and these have a destructive influence upon his character.

It is the child who through some physical or mental defect finds it impossible to hold his own in the class room that becomes the truant. He soon begins to realize that he is a failure, and feels that the school authorities are oppressing and persecuting him, that everybody's hand is against him, and the moral disease of unreliability soon manifests itself, because the person weakened by disease is weak in will power and more readily yields to temptation.

Judge Lindsay, the great authority on juvenile delinquency, insists that every boy who appears in his court have his teeth properly treated, so that he will be free from pain and infection, and be able to masticate his food. He realizes that the removal of a physical defect is often the first step in character building.

A Book of Poems by One of Us

Dear Doctor,—

Some of my professional brethren are probably aware of the fact that I have been contributing to Dental literature in my humble way for a matter of over thirty years.

In addition to this I have written some hundreds of poems, short stories, essays and other matter for various publications.

For some time past, a number of my good friends have been at me to make a selection for publication in book form and have promised to take up a certain number of copies.

An edition of five hundred copies is the least that can be economically published which means a number of extra copies to be disposed of.

My fellow-dentists in Ontario have given me many fine, personal friendships and no small, honorable, professional recognition for which I am deeply grateful.

In recognition of this I am giving them this opportunity to possess what I believe to be the first volume of verses written by a Canadian dentist.

Most Canadian dentists are good sportsmen who appreciate the call of the Field, the Forest, and the Flood and I feel that in "Morning in the Marsh and Other Poems" they will find much in sympathy with that call.

The close confinement of our professional duties makes out-of-doors recreation a necessity and hence many of us are devotees of the gun and the rod, the camp and the canoe, the motor boat, the sailing craft and the car. To sing the pleasures of

such is the purpose of the book and there are other things beside which may tickle the fancy.

It has taken thirty years to make this book, and it is yours for less than an hour's work, and not more than a dinner at the Chateau or a ticket for the opera.

The public status of a profession depends not alone upon its technical excellence.

It is enhanced by its position in art, literature and science in general. The proud position of the profession of Medicine to-day is due in no small degree to its contributions to these branches of culture.

Dentistry, comparatively young, has been mostly busy with its marvelous progress of the last quarter century, and has had little time for efforts outside of technical lines.

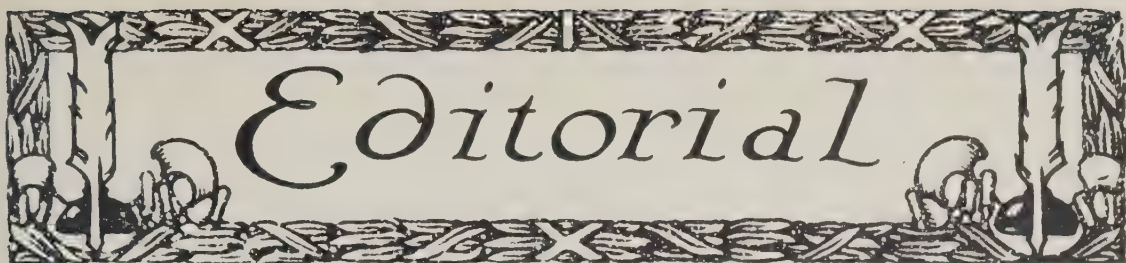
To-day, the recognition of our profession is assured as the equal of its older sister, and it is time to cast about in broader fields of culture.

The way of the pioneer is always more or less difficult and success can be attained only through kindly appreciation within the profession. Dentistry can undoubtedly produce its poets, its artists, its story-tellers and its men of science, the flowering of its culture. The pioneers look to you for encouragement and support knowing that the profession at large will reap a benefit in general recognition and goodwill.

Trusting that I shall have the pleasure of receiving your subscription, I remain,

Yours fraternally,

MARK G. McELHINNEY, D.D.S.



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No. 1

Intelligence Tests for Dentists

The study of philosophy or more properly speaking the study of biology and psychology would indicate that all men are not born equal and that heredity plays a very large part in the success or failure in life's battles. It can be shown that notwithstanding all the talk about democracy and majority rule when it comes to actual practice a minority rules and an exceedingly small minority at that. Thus there is in the fight for life the classes and the masses. One of the great national wastes is the time spent in attempts to educate some people beyond the point they have capacity to acquire. There are all grades of mental capacity as there are of sizes of leaves on trees. It is a waste of time to try to change them all in one generation. Based upon this fact some universities have set up what they are pleased to call intelligence tests for admission and more recently are changing the character of the tests given candidates for advanced standing and for graduation. It is thought that the essay form of examination test does not give a true gauge of the candidate's intelligence or knowledge of a subject and often works an injustice to the one who knows much more than what he has a chance to express. The new form of short answer test gives opportunity for a wider scope.

Intelligence tests for admission to the study of dentistry have not worked out at all satisfactorily. In one case the low grade intelligence candidates made the best showing in the term's work and the final examinations. This may not have been any fault of the system but of the test given. Or it may have proved that it does not require intelligence to study dentistry.

Many teachers of dentistry think there are even seventy-five per cent. of students whose capacity to study dentistry is questionable. No form of admission test yet devised has provided a plan of gauging the candidates aptitude with manual tools nor is there any gauge of his powers of application to his studies. Occasionally and in fact generally old candidates in dentistry do wonderfully well in their studies but poorly in the application of these studies to practice, while young candidates who have a hard time to pass the admission test often do well in dental college studies and practice. But, thanks to the versatility of the human mind those who do well in one subject do well in another. It is the exception to see a man succeed wonderfully well in one department of life and a total failure in another.

There isn't any doubting the fact that over ten per cent. of candidates in the study of dentistry are going to be a failure in its practice and will have to sooner or later seek some other calling. A very large portion of the money spent on such a student's dental education is a total waste. There is very much to be said in favor of limiting higher education to those who have brains enough to take advantage of it and not allowing the stupid rich to occupy the seats of the brilliant poor, especially since the state pays such a large proportion of the cost of higher education.

Pulp Testing

"Application of a hot burnisher or hot gutta percha or hot water will be negative as far as pain production is concerned if the pulp is dead. The hot burnisher does not cover a sufficiently large area of the tooth surface to convey enough heat to the pulp to give a sensation. Hot gutta percha or compound will do this. The writer could never understand how hot water could be applied to a single tooth from a water syringe without its getting onto other teeth and thereby nullify the test. It reminds one of the Yankee's method of weighing a ham he was about to sell to a neighbor. He balanced it on a fence rail with stones at one end and the ham on the other and then guessed the weight.

Editorial Notes

Dr. Edward C. Kirk will address the Academy of Dentistry at its March meeting.

The St. John, N. B., Dental Society held its regular monthly meeting at the Admiral Beatty Hotel, the President, Dr. Coughlan, in the chair. The Society volunteered its services for a survey of welfare work as had been suggested at a public meeting.

On Friday, Dec. 17, 1926, the dentists of Hamilton treated fifty children from the county. The dentists gave their services free, the Health Centre of Hamilton gave the use of the equipment and the county paid for the cost of materials. This seems to be a real economy. One of the chief barriers to rural dental service is the cost of equipment.

PRIZE ESSAYS ON ORAL HYGIENE FOR CHILDREN

Over 9,000 essays were written by the children in the public schools of London and Middlesex County, for the prize offered by the Ontario Dental Health Association, the children to take "Dental Health" as the subject of their essays.

The judges in the contest have weeded out all but ten of the essays turned in, and an announcement of the winners is expected next week, according to Dr. S. A. Moore, secretary of the association here.

The children of London handed in nearly 4,000 essays, but owing to school board regulations they are not permitted to take any prizes, Dr. Moore said this morning.

Fifty dollar prizes were given on the Hamilton dental health day for essays on oral hygiene, but nothing

for many excellent posters submitted, so the Board donated \$15 in addition for prizes for posters.

Each introduction of new appliance offers an opportunity for both the manufacturer and the dentist to combine to sell their wares to the public. Not infrequently those things which are heralded with the boldest praises turn out to be far short of what is in common use.

It would appear from the report of the survey of the children of Fort William that each child has two decayed teeth. The survey was made by Drs. Mitchell, Legge, Quackenbush, Strachan, Langtry and McDonald.

Dental examinations of school children in most cities show more tooth defects than all other defects together.

In this issue we are glad to publish a review of a most interesting book called "Prunes and Pancakes" by Dean Owre, Dental Department of the University of Minnesota. We also made an extensive quotation on "Diet for Children" from the same book. So many dentists in Canada are at that period in life when they are rearing children that this quotation will be of intense interest to them as well as to their patients.

Little progress will be made in selecting diets for children and even for adults, until women take up its study seriously. Men may study and write about children's diets, children's diseases, and infant feeding and even adult feeding, but so long as mothers direct the daughters' household education, the same kinds of foods and the same methods of

cooking and housekeeping will be handed down from generation to generation. Daughters may be taught at college how to cook an egg in the shell, but when they go home they boil it in the same old way.

Dental programs and some dental magazines use the word "clinic" when they really mean "demonstration". Another unusual use of the word "clinic" has by usage in Canada especially been applied to the dental surgery where public patients and especially children are treated.

A clinic has been generally understood to mean the presentation of a sick patient before students for the purpose of their instruction. It implies the presence of a patient, a learner and a teacher and does not mean a building.

A demonstration is the performance of a procedure in the presence of onlookers, hence carving or pouring plaster models is a demonstration not a clinic. A surgeon may demonstrate how to close a wound as part of his clinic in surgery and the physician may give a clinic and demonstrate nothing.

BOOK REVIEW

Prunes and Pancakes

BY ALFRED OWRE, PUBLISHED BY THE UNIVERSITY OF MINNESOTA PRESS,
MINNEAPOLIS. PRICE 75 CTS.

Prunes and Pancakes is a small but invaluable book on dietetics. Although it consists of only 125 pages it is very comprehensive.

Dr. Alfred Owre, the author, shows the necessity for dietetic reform in connection with health. He believes that we must have the proper kinds of foods and the proper combinations of foods as well as the proper amounts.

In regard to the importance of having a selected diet he aptly states "A gasoline engine will not run at all if fed with coal, and yet our human bodies, built for simple primitive foods, will run for years in spite of abuse".

Dr. Owre outlines the diet suitable for children and for adults and he moreover shows the close connection there is between proper diet and dental health. He devotes a considerable portion of the book to describe how the conditions of the teeth

can be improved by correct diet.

He has also made out a properly constructed series of menus as well as a list of foods showing the percentage of proteins, fats and carbohydrates contained in each. The reader will thus be enabled to originate menus of his own, based on a correct foundation. For this reason alone the book is invaluable to any housewife.

The book is not only interesting reading but is written in a very convincing way.

Dr. Owre carries conviction with him. To quote his own words: "I experimented on myself, my friends and my family for years; but I long ago reached the point where experiment ceased and conviction began".

"Prunes and Pancakes" should be of interest to all, for, as the author himself says, the diet prescribed concerns those from nine months to ninety years.

OBITUARY



DR. STANLEY BURNS

In the passing of Dr. Stanley Burns, consulting dentist, Montreal suffers the loss of one of its well-known and respected citizens. He was the son of the late Dr. Robert Burns, and was born at Pakenham, Ont., on September 26, 1868. He practised dentistry for several years in Smith's Falls, Ont., coming to Montreal in the year 1903. Dr. Burns not only achieved deserved distinction in his profession, but by his genial manner and unselfish life won the affection of a host of friends, to whom his death brings deep sorrow. Some few weeks ago he became a patient in the Royal Victoria Hospital, but the nature of his disease was such that hope for his recovery was soon abandoned. He returned to his home, 17 Lorne avenue, about a week ago, and died early yesterday morning.

Dr. Burns was a member of Erskine United Church. In the ab-

sence from the city of the Rev. Dr. Pidgeon, the Rev. Dr. S. P. Rose, a personal friend, will have charge of the funeral.

Dr. Burns is survived by his widow, two daughters, and a son, Robert P. Burns.

CHRISTMAS GREETINGS TO THEIR CUSTOMERS AND FRIENDS

THE ASH-TEMPLE COMPANY, LIMITED,
TORONTO, CANADA.

Permit me again to express my sincere thanks for your patronage during the year 1926.

Again may I hope the members of The Ash-Temple Company have endeavored to give that genuine service which strengthens and confirms the feeling that we have the best interests of the Profession at heart.

We begin the New Year auspiciously. Forgotten are the trials of yesterday. A survey of conditions in Canada finds much to hearten and confirm my continued belief in the prosperity of the Dominion. We have emerged from the shadow of unsatisfactory earnings and are now on the bright highway of prosperity.

The Ash-Temple Company, Limited joins with me in wishing you a very merry Christmas and a happy and prosperous new year.

H. P. TEMPLE, President.
Christmas, 1926.

Through correspondence with the California State Dental Assoc., the Calgary Dental Society has succeeded in having Calgary included in the itinerary of Dr. J. Sim Wallace, noted lecturer. Dr. Wallace comes from England and the Calgary Society is fortunate in securing him. He will lecture in that city on Jan. 10th, 1927.

Itinerary of J. Sim Wallace in a Lecture Tour of America

Leave	New York	12.01 A.M.	Tuesday	December 28, 1926	N Y N H & H.*
Arrive	Boston	8.00 A.M.	Tuesday	December 28, 1926	
Leave	Boston	8.30 P.M.	Wednesday	December 29, 1926	C P No. 209
Arrive	Montreal	8.40 A.M.	Thursday	December 30, 1926	
Leave	Montreal	11.00 P.M.	Friday	December 31, 1926	C P No. 21
Arrive	Toronto	7.35 A.M.	Saturday	January 1, 1927	
Leave	Toronto	9.15 A.M.	Sunday	January 2, 1927	C P No. 721
Arrive	Niagara Falls	11.52 A.M.	Sunday	January 2, 1927	
Leave	Niagara Falls	6.15 P.M.	Sunday	January 2, 1927	C P No. 832
Arrive	Toronto	9.40 P.M.	Sunday	January 2, 1927	
Leave	Toronto	11.30 P.M.	Monday	January 3, 1927	C P No. 635
Arrive	Detroit	7.35 A.M.	Tuesday	January 4, 1927	
Leave	Detroit	12.00 A.M.	Tuesday	January 4, 1927	M C No. 19
Arrive	Chicago	7.45 A.M.	Wednesday	January 5, 1927	
Leave	Chicago	6.35 P.M.	Wednesday	January 5, 1927	Soo No. 3
Arrive	Minneapolis	8.55 A.M.	Thursday	January 6, 1927	
Leave	Minneapolis	5.00 P.M.	Friday	January 7, 1927	Soo No. 109
Arrive	Winnipeg	8.15 A.M.	Saturday	January 8, 1927	
Leave	Winnipeg	1.00 P.M.	Sunday	January 9, 1927	C P No. 3
Arrive	Calgary	4.30 P.M.	Monday	January 10, 1927	
Leave	Calgary	4.00 A.M.	Tuesday	January 11, 1927	C P No. 1
Arrive	Vancouver	7.25 A.M.	Wednesday	January 12, 1927	
Leave	Vancouver	12.01 A.M.	Thursday	January 13, 1927	G N No. 357
Arrive	Seattle	7.30 A.M.	Thursday	January 13, 1927	
Leave	Seattle	11.50 P.M.	Thursday	January 13, 1927	N P No. 334
Arrive	Spokane	3.15 P.M.	Friday	January 14, 1927	
Leave	Spokane	10.50 P.M.	Friday	January 14, 1927	N P No. 2
Arrive	Butte	11.35 A.M.	Saturday	January 15, 1927	
Leave	Butte	7.45 A.M.	Sunday	January 16, 1927	U P No. 30
Arrive	Pocatello	4.40 P.M.	Sunday	January 16, 1927	
Leave	Pocatello	6.25 P.M.	Sunday	January 16, 1927	U P No. 17
Arrive	Boise	1.02 A.M.*	Monday	January 17, 1927	
Leave	Boise	11.59 A.M.	Tuesday	January 18, 1927	U P No. 23
Arrive	Portland	7.15 A.M.	Wednesday	January 19, 1927	
Leave	Portland	8.30 A.M.	Friday	January 21, 1927	S P No. 11
Arrive	San Francisco	11.30 A.M.	Saturday	January 22, 1927	
Leave	San Francisco	8.00 P.M.	Saturday	January 29, 1927	S P No. 76
Arrive	Los Angeles	9.25 A.M.	Sunday	January 30, 1927	
Leave	Los Angeles	10.51 A.M.	Wednesday	February 2, 1927	U P No. 8
Arrive	Salt Lake	12.25 P.M.	Thursday	February 3, 1927	
Leave	Salt Lake	1.00 P.M.	Friday	February 4, 1927	U P No. 8
Arrive	Denver	12.30 P.M.	Saturday	February 5, 1927	
Leave	Denver	2.30 P.M.	Sunday	February 6, 1927	U P No. 20 - 22
Arrive	Kansas City	9.00 A.M.	Monday	February 7, 1927	
Leave	Kansas City	11.20 P.M.	Monday	February 7, 1927	M P No. 10
Arrive	St. Louis	7.27 A.M.	Tuesday	February 8, 1927	
Leave	St. Louis	11.59 P.M.	Tuesday	February 8, 1927	C & A No. 8
Arrive	Chicago	7.45 A.M.	Wednesday	February 9, 1927	
Leave	Chicago	7.35 P.M.	Thursday	February 10, 1927	P. No. 144
Arrive	Cleveland	8.10 A.M.**	Friday	February 11, 1927	
Leave	Cleveland	8.00 A.M.	Saturday	February 12, 1927	P. No. 312
Arrive	Pittsburg	11.30 A.M.	Saturday	February 12, 1927	
Leave	Pittsburg	11.15 P.M.	Saturday	February 12, 1927	P. No. 52
Arrive	Washington	8.35 A.M.	Sunday	February 13, 1927	
Leave	Washington	11.00 A.M.	Tuesday	February 15, 1927	P. No. 118
Arrive	Baltimore	11.59 A.M.	Tuesday	February 15, 1927	
Leave	Baltimore	9.55 A.M.	Wednesday	February 16, 1927	P No. 114
Arrive	Philadelphia	11.55 A.M.	Wednesday	February 16, 1927	
Leave	Philadelphia	10.00 A.M.	Thursday	February 17, 1927	P. No.
Arrive	New York	12.00 A.M.	Thursday	February 17, 1927	
Sail from New York—*Car may be occupied till 8 A.M. **Extra fare \$4.09.					

DENTAL SOCIETIES

Meeting of the First District Dental Society of the State of New York, December 6, 7, 8, 1926

There were many unique features of this meeting. On Monday afternoon Dr. Rickert of Ann Arbor gave a demonstration on root canal work which was followed by a dinner and the regular monthly meeting of the Society to which every dentist was invited. All other sessions cost \$5. Drs. Haden, Hatton and Rickert were on the first evening.

The regular programme began Tuesday 9.30 a.m. with seven sections running. Prosthetics, Rubert E. Hall; Focal infection, Russel L. Haden. Root canal treatment and its relation to Apical Pathology, Edward H. Hatton. Dewey School of Orthodontia, Harvard Amalgam Club, Periodontia Clinic Club and Prosthetic Club.

General clinics followed in the afternoon. At night was the side show, cancer of the mouth and pre-cancerous conditions and relation of cancer to dental work. Dr. Rupert Hall showed the application of a new principle for the checking of positional relations of the mandible and the reproduction of the movements of the mandible. The principle is made practical by being incorporated in an articulator mechanism which consists of two three dimensional guides and one two dimensional guide. This assembly is capable of fixing any positional relation of the mandible and forming the path of the movement of the mandible from one positional relation to any other positional relation, the much sought

accomplishment in articulator construction.

Wednesday morning was occupied with general clinics and the luncheon gave opportunity for the presentation of six different subjects from oral hygiene to physical training.

The afternoon took the form of several conferences under the direction of a chairman and a leader. These were interesting and instructive. Below are the subjects which give a fair idea of the range of subjects. We commend this idea to the Ontario program committee. The programme itself is a dental education.

WEDNESDAY, DECEMBER, 8TH,
1926, AT 2.30 P.M.
TOPIC DISCUSSIONS

An unique feature of this meeting is a session devoted to Topic Discussions. Essentially, this will be a clinic session without clinics. The session will be held in the large clinic hall, chairs being placed so that each topic leader may have his own audience without conflict with the others. The leader will open the discussion by a short talk, and will then answer questions on the topic assigned. Such topic discussions conducted informally and spontaneously, are a familiar feature of all dental meetings, and they are now assigned to a definite place on the program. It is the hope of the committee that they may prove to be both valuable and interesting.

Topic—Full Denture Service

Chairman—Henry W. Gillett, D.D.S.

Leader—Rupert E. Hall, D.D.S.

1. What is meant by positional relations of the mandible.
2. What is meant by and of what significance are the movements of the mandible in prosthesis?
3. What is meant by the gothic arch?
4. To what geometric figure is the mandible likened for study of positional relations and movements?
5. Is the positional relation and movement of one point of the mandible of greater importance than the other?
6. How many points are necessary to fix a body to determine its positional relations and movement of the body from one positional relation to another positional relation?
7. What form of structure is required to check any changed positional relation of a body and record its movement from one positional relation to another positional relation?
8. Is the face bow a necessary adjunct in connection with the three dimensional guides in checking positional relations and movements of the mandible?

Topic—Partial Denture Service

Chairman—Charles Ash, D.D.S.

Leader—Forry R. Getz, D.D.S.

1. What is a partial denture?
2. What are the defining characteristics of a prosthetic dental restoration, commonly spoken of as a partial plate?
3. Is there any distinction to be made between a partial denture and a partial plate?
4. The partial denture (plate) of earlier dentistry was ordinarily made of vulcanite, or gold or both and had no attachments, like the various forms of clasps

or other contrivances for retention and stabilization; would the addition of any of the various forms of attachments change the character of the restoration?

5. On the basis of these differences, how would you correctly and accurately name such a restoration?
6. In using the general term partial denture, would you differentiate between (1) a bilateral restoration of bicuspid and molars with a sublingual bar, and (2) a unilateral restoration of bicuspid and molars having a sublingual bar and attachment on the opposite side for stabilization?
7. What are the four main forms of sublingual bars?
8. Is it good to carry the bar over the lingual surfaces of the lower incisors?
9. What is the characterizing difference between a partial denture and a removable, saddle bridge?
10. In taking up a case where conditions call for the use of a partial denture with some form of attachment; what are the first steps to be taken in preparation of the mouth?
11. How would one go about determining the type and form of a lower partial denture and how decide upon the type of attachment to be used and the bearing points for retention and stabilization in a case, for example, with second bicuspid and molars missing on both sides, teeth good, occlusion close, and distance from fraenum to gingival edge of gum, short?
12. Can this diagnostic study and outline work be done without good models; can uniformly accurate models be made from compound impressions?

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No. 2



DR. E. M. DOYLE, CALGARY

President Dental Society of Western Canada for 1927, and under whose direction the meeting in Edmonton in May 25, 26, 27, 1927, is being brought about.

ORIGINAL COMMUNICATIONS

President's Address, Annual Meeting of the C. O. P. A., Jan. 31st, 1927

W. C. TROTTER, B.A., D.D.S.

Gentlemen:—It has been my privilege to act as President of your Association for another year. The thorough co-operation I have received from every member of the executive and from the Dental Executive has made the work a pleasure. Our Association suffered an irreparable loss last summer when our worthy and much esteemed Vice-President, the late Dr. Horace E. Eaton, was unexpectedly called to his Rest. He had been associated with this organization from the beginning and his ardent enthusiasm and loyalty were a great factor in its success and popularity. As you all know, he was an indefatigable worker for any cause he associated himself with and he certainly gave this Association the full benefit of his mature judgment and experience at all times. We all sadly miss his wise counsel and lovable personality. Dr. Eaton will be missed not only by the C.O.P.A., the C.D.H.C., the Ontario Dental Association and the whole profession of dentistry, but by every organization which he took an interest in whether of Church or of State. Notwithstanding the fact that it has taken the whole year for the Stevens Hepner Co. of Port Elgin to get their machinery and equipment ready to turn out Hutax Brushes according to quantity and specifications agreed upon, we have managed to wind up our financial year in a much improved position from that of last year, thanks to the successful efforts put forth by Mr. Hargreaves and our

Dental Executive to dispose of the large stock of imported tooth brushes held by us at the close of last year. By the judicious handling of these brushes we have been able to keep the trade supplied with Hutax Brushes while awaiting the advent of our Canadian-made brush. The royalties from the brushes sold during the year have earned us a nice little surplus which puts our financial statement in much better shape than we had dared to anticipate a year ago. Now that the Stevens Hepner Co. through their distributing agents John Huston & Co., are going to look after the sale of brushes throughout the Dominion the sale of brushes should steadily increase and likewise our revenue. We are satisfied that the quality of the new Made-in-Canada brush is superior to anything we have yet had and as far as we know is superior to anything else on the market, so optimism is our keynote. Our tooth paste has had to contend with such keen advertising competition that we feel rather proud to think that it has been able to practically hold its own. As most of the advertised advantages of many of these preparations are more imaginary than real and as in some cases we know them to be based on false premises, I feel that the sales of Hutax Paste will continue to hold its own and in all probability slowly improve. With the distribution of both paste and brushes taken care of by the manufacturers of same, the business responsibilities of this Association will be much lessened and

the time of our dental executive made more available for educational work.

As the Canadian Dental Hygiene Council undertook to look after and organize the oral hygiene work of the Dominion and as we agreed to loan them the services of our dental executive to help them in that work, this practically means that most of his time will now be available for the use of the Council. Up to the present the Council has not made use of all of Dr. Thomson's time, mostly on account of lack of funds to pay his expenses while working in other Provinces. Fortunately for us there has been enough of his time at our disposal to enable him to wind up our stock of imported brushes, to get our finances re-established and to complete the arrangements for the manufacture and distribution of the new Made-in-Canada Hutax Brush.

Though all of Dr. Thomson's time has not been required by the Council nevertheless his services have been used with splendid results.

As Chairman of the Executive Committee of the C.D.H.C., I want to assure you that though at times I have been greatly discouraged by the slow progress made by the Council, yet at the present time I am feeling

much more optimistic about the outlook. There now seems to be more unanimity of opinion in regard to the programme of work we should carry on and the manner in which it should be done. It has been decided to make a definite and decided effort to raise funds for the Council and also to again enlist the sympathy and assistance of the Federal Government now that they are more permanently established at Ottawa. The executive committee is now organized with Dr. Grant as Secretary, Dr. Thomson as Field Officer, myself as Chairman, and an active sub-committee consisting of Col. Nasmith, Dr. Grant and myself, to organize, finance and manage the affairs of the Council and to arrange work for Dr. Thomson. This sub-committee is to report to the full Executive from time to time. This is the first time that a really workable plan to manage the affairs of the Council has been agreed upon, so I have great hopes that it will soon bear fruit, in fact if I cannot report more satisfactory progress by this time next year I shall not expect the members of this Association to have any further patience either with me or the C.D.H.C.

Report of Dental Executive

Mr. President and Gentlemen:

I beg leave to present to you a report of the activities of the Canadian Oral Prophylactic Association for the year 1926.

It is well, I think, that once a year, individuals and organizations should climb to the hilltop of their history and past achievements and review just how they have climbed, their methods and progress and the effect on others. From these same heights we are able to look forward and make

a survey for the future, in anticipation of possible work to be done, both in the immediate present and in the days to come.

To-night, as an organization, we are privileged to look back on twenty-two years of splendid history. Let us study for a moment what kind of a trail we have left. Have we always cleared away the underbrush in order to leave a clear path? Have we dislodged stepping stones on our upward climb, or did we make them even

more secure—so that others could follow? Perhaps in some instances, we have climbed Alpine-like, with a rope around our waists so that we might lend assistance to others.

Twenty-two years ago the view presented from the hilltop was very little but barrenness and desert places as far as Oral Hygiene work was concerned, but what a difference now! Looking out over the ground of the future, what a change we see there. We find settlements all over the landscape, provincial oral hygiene committees in every province, oral hygiene committees in almost every city, public school clinics in all the most important cities and towns, and in the Province of Ontario a Director of Dental Health in the Provincial Department of Health. So our plans for the future must be different to what they were twenty-two years ago, but with the same end in view—that of providing the means for carrying on Oral Hygiene educational work—first to the Dentist and through him to the community. This has been the ideal of the Canadian Oral Prophylactic Association, and assisted by the efforts of many individual dentists it has carried throughout the Dominion of Canada a story of the importance of a thorough knowledge and application of the principles of Oral Hygiene.

In the future we see a constantly growing work to be accomplished and this means the need for greater financial assistance; greater financial assistance from our Association means that we must have increased revenue, and to provide this increased revenue, we would ask every Dentist in Canada to support our association and its products.

In the past twenty-two years our Association has grown from year to year fulfilling the dual purpose for which it was formed by men of broad vision, namely, to provide mouth preparations, Hutax Dentifrice and Hu-

tax Tooth Brushes, that are dependable, scientific and efficient, and through these products, by means of money received from royalties, to provide the funds or financial assistance to promote or carry on Oral Hygiene work in the Dominion of Canada. The growth of this work is best evidenced by our financial report which you will receive to-night. From a revenue of less than \$100 a year twenty-two years ago, it has grown to such proportions during these latter years that thousands of dollars have been provided each year for educational work. Revenue for 1926 is eleven thousand.

We would ask you to study very thoroughly the history of the Canadian Oral Prophylactic Association covering these twenty-two years that you may learn how it has been possible for a body of professional men to promote and carry on an organization based solely on an ideal and to make that ideal practicable—thus producing an ethical business organization that has grown to such proportions that to-day it stands out unique and alone—an organization carried on solely that others might be served. This, I say, is "Service" of the highest type and implies the broadest meaning of that word as it is used to-day.

The study of the history of the Canadian Oral Prophylactic Association brings you to a study of its products, Hutax Tooth Paste and Hutax Tooth Brushes. A constant endeavor has been made to keep both these up to the highest standard, from both a scientific and a manufacturing standpoint. The success of that endeavor has been proven by the quantities of each that have been sold, without any advertising or sampling or any of the various means of sales promotion usually employed by the manufacturers of such products. The constant desideratum of the Canadian Oral Prophylactic Association has been to inspire the Dentist with confidence in

the reliability of its products and to provide the Profession with a safe and efficient mechanical means of promoting Oral Hygiene.

HUTAX BRUSHES

During the year 1926 Hutax Brushes have gone through the process of reorganization, by a change in manufacturing and sales agents. You will remember that at the last Annual Meeting it was announced that a contract had been entered into with the Stevens-Hepner Co., Port Elgin, Ont., to take over the manufacture and sale of Hutax Tooth Brushes. As was explained at that time the object was to provide a Made-in-Canada Hutax. For a long time this has been the aim of this Association. It was thought and latterly has been proven that this firm which had been making high-grade toilet brushes for thirty-one years was qualified to manufacture and market a brush that fulfilled every qualification necessary in Hutax. This it has done, and to-day there is on the market a Made-in-Canada Hutax, better looking, better manufactured and superior in every way to any Hutax Tooth Brush heretofore sent out. Though the contract was signed January 10th, 1926, it was not until January 1st, 1927, that the Stevens-Hepner Co. were manufacturing and ready with a full line of brushes and on and from that date this firm has taken over the entire distribution of Hutax for the whole of Canada.

During the year 1926 the brush business has been carried on by the Hutax Brush Company, with Mr. John Hargreaves as Manager. During the year the stock of imported brushes has been disposed of and the Trade kept supplied. Meanwhile, time and opportunity were given to try out the new Canadian products.

And now the new Made-in-Canada Hutax Tooth Brush is on the market, and the Association is proud of it. Letters have been received from den-

tists and druggists stating that it is much superior to any previous brush and conforms to all the exacting requirements of the Hutax standard.

The Brush, as has been stated, is made by the Stevens-Hepner Co., and is marketed to the trade by John Huston Co., 468 King St. West, Toronto. With the quality of the brush assured and made in Canada and the reliability of its manufacturers and the high standing and aggressiveness of the sales agents, the Association can with every sincerity ask you to endorse and prescribe Hutax Tooth Brushes. We are convinced that your patients will thus receive the best that can be provided for the mechanical cleansing of the mouth and you will then be assisting in promoting the work of the Canadian Oral Prophylactic Association in providing funds to carry on Oral Hygiene work.

During the year 1926, the royalties received from Hutax Brushes were greatly increased over 1925, and a much greater increase is expected for 1927.

SCHOOL BRUSHES

During the year 1926 the Association provided many thousands of "Special For School Children Hutax Brushes." This is a special brush that is supplied only to school teachers, school boards, and school nurses, at less than one-third the regular price as a part of the educational work of the Canadian Oral Prophylactic Association. The good accomplished in this way makes the scheme more than worth while, for the interest of the teacher, as well as that of the school board is aroused, and instructions are given to the pupils on how to keep the mouth clean, with some definite means provided to assist them in their efforts.

HUTAX TOOTH PASTE

To promote an ideal dentifrice was one of the aims of the Canadian Oral Prophylactic Association. In an endeavor to keep Hutax Tooth Paste up

to the highest requirements of a dentifrice, we are constantly following the research reports of the different scientific men engaged in this work, so any desirable change can be made in the formula. The Association has long maintained that an ideal dentifrice must be a harmless, safe and efficient cleansing agent. Hutax paste is bland, free from grit, promotes no strong chemical action in the mouth, is neutral in reaction to litmus, is not medicated, but is a safe, pleasing, antiseptic mouth cleansing agent. The compounding is correctly carried out by Lyman Bros. Limited, Front St., Toronto, and this firm's reputation assures the reliability of the product.

During the last few years we have seen very extensive advertising campaigns carried on to promote the sale of "Strong Acid Tooth Pastes," "Mildly Acid Tooth Pastes," "Fruit Acid Tooth Pastes," "Strongly Alkaline Tooth Pastes," and very many "Medicated Tooth Pastes." In the opinion of your Executive, all of these are opposed to the best interests of Oral Hygiene. Many firms have spent enormous sums of money advertising these various pastes and in distributing samples. On the contrary, Hutax paste is not advertised to the public at all, nor are any samples distributed. It is sold only on the prescription and recommendation of dentists. Nevertheless, despite this keen competition, the sales have remained constant during the last few years with but a slight falling off during 1926.

With this knowledge of the history of the products of the Canadian Oral Prophylactic Association, with faith in its founders and the ideals they have maintained for it, and with confidence that the profits made from royalties will be used to promote Oral Hygiene work in your Community and throughout the Dominion, we ask you to prescribe and recommend Hutax Tooth Paste.

MADE IN CANADA

Hutax products, both brushes and tooth paste, are made in Canada by clean Canadian workmen, under sanitary conditions in ideal surroundings. Every cent of money made on them is retained in Canada, and not one cent of profit derived from royalties is distributed to shareholders or directors.

EDUCATIONAL

The Educational work formerly carried on by the Canadian Oral Prophylactic Association was by arrangement with the Canadian Dental Hygiene Council to be carried on by that Council. For this purpose the Canadian Oral Prophylactic Association has turned over to the Canadian Dental Hygiene Council, without salary, the services of its Dental Executive. During the year 1926 he has carried on many activities under the auspices of the Canadian Dental Hygiene Council, working under the direction of various local and provincial Oral Hygiene committees.

For detailed reports of these I refer you to reports of the Canadian Dental Hygiene Council, Toronto Academy of Dentistry, etc.

CONVENTIONS

During the past year your Dental Executive attended three provincial dental society meetings and the Canadian Dental Association meeting at Halifax. At each of these the aims of our organization were brought to the attention of those present and samples of Hutax products were distributed.

OUR OUTLOOK

The outlook for the future is brighter than for many years. Our finances are in better condition; this year's balance sheet shows a healthy surplus; our tangible assets have about doubled since last year. Our brush business is on a sounder and more satisfactory basis; Hutax Tooth Paste is maintaining its place. So with the improvement in general bus-

iness conditions we are looking forward to 1927 with high hopes that we will be in a better position than ever to serve Dentistry and the Public.

For twenty-two years the Canadian Oral Prophylactic Association has carried on commercial activities, built and maintained on the foundation of

professional ethics, to provide the funds to carry on Oral Hygiene work. On the strength of this, we present to you our entire history, our methods, hopes, aspirations and balance sheet. We ask of you, your confidence and support of this great work.

HARRY S. THOMSON, D.M.D.,
Dental Executive.

The Modern Dental Society Group Discussion

Topic—Orthodontia.

Chairman—J. Lowe Young, D.D.S.

Leader—Martin Dewey, D.D.S.

1. Should malocclusion of the deciduous dentition be treated?
2. What effect has the early loss of deciduous teeth in the production of malocclusion of the permanent teeth?
3. What constitution diseases have a typical bearing in the production of malocclusion?
4. Are pernicious habits important factors in the production of certain types of malocclusion?
5. What is the relative danger in producing injury to the pulp in the correction of malocclusion?
6. What is the relative proportion existing between acquired and hereditary factors in the production of malocclusion?
7. Are regulating appliances a great pre-disposing factor to caries during treatment?
8. Do malocclusions tend to correct themselves spontaneously

or do they become progressively greater deformities?

9. Should the general practitioner prepare himself to treat the simpler case of malocclusion?
 10. What can be designated as a simple case of malocclusion and how can it be recognized?
 11. Does the prolonged use of mechanical retaining devices aid in obtaining permanent results or are they often a detriment?
 12. Can all malocclusions be successfully treated with one type of appliance?
 13. What are the relative merits of rapid tooth movement in comparison to slow tooth movement?
 14. What relation has the function of the teeth to the osseous structure?
 15. To what degree can we expect changes in the nasal cavity during correction of malocclusion?
 16. Can under-development of the mandible be greatly improved by orthodontic treatment?
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Odontomes

BY GORDON FRAWLEY, D.D.S., TORONTO.

Patient, Mr. P., age forty-five years, suffering from rheumatic pains in limbs, was recommended by his physician for a thorough oral examination.

Clinically, his mouth was in a normal healthy condition—the right lower cuspid, however, was missing with no history of extraction.

The radiographic examination revealed a number of bodies in the

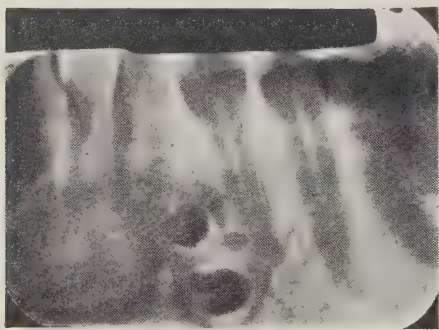


Fig. I.

missing lower right cuspid area. No other foci of infection were disclosed.

The patient was referred to me for consultation and it was agreed to remove these abnormalities.

Pseudo-stereoscopic pictures were taken by Dr. R. M. Box to approximate the location of these bodies individually. This showed them located between the buccal and lingual plates. It also revealed a number hidden by the "flat" picture.

An incision was made between the lateral and first bicuspid. The mucous membrane and periosteum pushed back and a portion of the buccal plate removed. Three of these bodies,

lying toward the apical region, were incapsulated in a cyst. The remaining five were imbedded in cancellous bone.

All were removed and the incision drawn together by sutures leaving

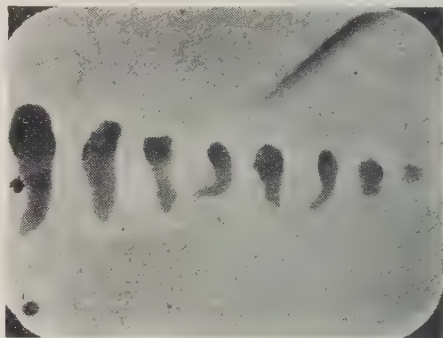


Fig. II.

only room for a light dressing of 5% iodoform gauze. The wound recovered without complications.

Eight days after the operation the symptoms of rheumatic trouble had disappeared.



Fig. III.

A Review of the Scientific Investigations on Calcification of the Dental Pulp by Drs. Cahn and Ottolingué

T. C. TRIGGER, ST. THOMAS, ONTARIO.

The recent investigations of the above subjects have been thoroughly dealt with by the above named authors in their scientific experiments and a report of their findings in the papers which were presented in the November and December, 1926, issues of the *Items of Interest*.

There is no doubt that the report of their investigations will receive wide spread interest by scientific investigators, as calcic lesions and the like of the dental pulp have been an undecided question for so many years, as to a proper and satisfactory classification of such pathological degeneracies.

Salter was the first investigator to make a classification of various forms of growth within the pulp chamber, namely:—1. dentin of repair; 2. dentin of excrescence; 3. interstitial calcification. Black, however, in his exhaustive investigations, divided these lesions under six different forms, but I think his classification is obvious.

Drs. Cahn and Ottolingué's pathological classification, as far as my observation goes, the most feasible, is as follows:—1. Secondary dentin; 2. Pulp stones or pulp nodules; 3. interstitial calcification.

In their photomicrograph cut which they use in Fig. 3, page 900, in the December issue of the *Items of Interest*, made by Prof. Boeckner, excellently shows in a clear manner, the growth of secondary dentin and interstitial calcification, clearly demonstrates a distinct difference in their histological formation.

As far as my observation goes I quite agree with the essayists, that pulp stones have a different histological structure from interstitial calcification, they state "The mode of formation of these two conditions is also entirely different. The former are lamellated masses of calcium and magnesium salts, while the latter are made up of dentin, showing tubules running in a disorderly manner."

I have no evidence to prove that these lesions can be absolutely determined by radiographic findings, but Cahn claims that radiographic pictures show, absolutely no evidence of interstitial calcification, but sometimes show dentinal pulp stones.

In my practice I have found many cases of dental pulp stones. They are more prevalent lesion and cause more trouble to the patient than we generally are aware.

Pulp stones are usually found in the coronal area of the pulp, but they may be scattered throughout its entire length, developed singly or grouped formation, like grapes on a stem.

These nodules vary much in size and density and in general formation appear mostly oval. Frequently pulp tissue is attached to their periphery.

It is a very difficult matter to make a definite diagnosis as to pulp stones occurring within the tooth. In my clinical experience I found them more frequently in the first permanent molars than any other

teeth, but they may occur in others as well; this may be due to the high vascularity of these teeth, and at the same time an early development; also the physiological development and eruption takes place in the process of growth of the individual in childhood, and the pathological changes which the patient is possibly subjected to at a later period of life.

Pain may occur in the tooth, but there is no definite way of determining if it is caused by interstitial calcification or pulp stones. We can only make a conjecture, as to the possibilities of the degeneracy actually occurring, especially do we become suspicious where the tooth is affected with long standing process of decay, but not entirely involving the pulp chamber.

Salter, Wedl and others have referred to the presence of pulp nodules in the tissue of the pulp, as they are found in many instances, in teeth which are affected with caries, erosion, or abrasion, but they do not state that they exist in apparently healthy teeth. I have, however, found them in the last mentioned case. C. S. Tomes when investigating such degeneracies, found globular masses, in three out of five cases, in perfectly sound molars in post mortem subjects.

Particularly do I wish to mention a case which came under my observation of a patient who was suffering most terrible pain in the region of an upper first molar. On careful examination all the teeth on that particular side were apparently free from any decay and no evidence of any inflammatory disturbance manifested. It occurred to me, possibly it may be a degenerative condition of the pulp, such as pulp stones, and after making an opening through the crown of the tooth in the pulp chamber and then removing the nerve I found that several pulp

stones were attached to the pulp tissue.

I was surprised to learn from Dr. Cahn's report that calcic conditions of the pulp are found in unerupted teeth. This condition never occurred to me. It is a significant finding—a new discovery in the Dental Pathological field.

Cahn claims the phenomena of calcification is almost the same as the physiological process of ossification, excepting that in the case of calcification the chemical salts are deposited in a morbid or diseased tissue, while in the case of bone repair they are deposited in a vital tissue.

I have found calcic degeneration of the interstitial tissue and of the pulp stones may be found in most any condition of the teeth. These degeneracies are more likely prevalent in the teeth than we are aware and bring about localized and remote disturbances of the patient's health.

These conditions may be going on for a long time as we cannot lay down any definite diagnosis even in the early or late stages, without in exceptional cases, as to their real existence, take for instance in a slow process of decay in a molar until it has reached in close proximity to the pulp, then pain develops, necessitating the removal of the nerve tissue.

I am led to believe that calcic deposits in the pulp are the same as those similarly found in ossified areas.

Calcification may exist in different conditions, in some instances I have found frequently small areas of the pulp affected, while in other cases it extends over a large part of the tissue practically petrifying the whole organ, and appears as a whitish coloration. I found this condition in one microscopic picture.

As to the chemistry of calcification I am not in a position to state.

Ziegler claims that it "usually occurs in localities where the tissues have already lost their vitality or in some process of degeneration or necrobiosis"—an attraction for the lime-salts which are in solution, within the body, and enters into intimate combination with them.

Cahn appears to have made an exhaustive study of the chemistry of calcification. He asks two important questions, "What is the source of the calcium and how is it deposited within the tissue?" and "How are these salts taken from the blood and deposited within the tissue?"

In the first case he answers his own question, by stating that the salts come from the blood, and seems to agree with Wedl that they are held in solution or in suspension by the proteins.

If my microscopical observations be correct, in some instances as in pulp stones they appear to be entirely thrown off from their former relative position and the adjacent tissues appear to undergo a reparative process, possibly this may be the reason why an infected pulp gives no immediate trouble—nature's way of protection. We should consider all growths in the dentinal tissues as a morbid change in the proper functioning of those organs, which makes them pathological.

There must be some disturbance in the vitality of the pulp, the circulation, no doubt, becomes affected, thus bringing about a metabolic change in the contiguity of those tissues.

Cahn in his study of the etiology of calcification, says it may be due to the following causes:—

"1. The increased alkalinity, or decreased CO in the degenerating parts, cause a precipitation of the

inorganic salts in the fluids seeping through the tissues.

2. The tissues become so starved that they utilize the proteins of the seeping fluids, and the calcium cannot be held in suspension any longer.

3. The formation within the diseased parts of some substance that has a strong affinity for calcium, probably phosphoric acid.

4. The physical conditions are so changed as to favor the local absorption of salts, the least soluble collecting in excess.

5. The production of fatty acids within the tissues, etc."

I have examined a large number of teeth in the lower animals, especially those of the ungulata order, such as the horse, cow and deer tribe, where the teeth are subject to rapid development and change due to the wearing away, by process of attrition in the act of grinding, or from injury, but have never found any nodular growth in the tissues of the pulp. In very old teeth of ruminants I have noticed a complete obliteration of the pulp cavity, due to secondary dentinal growth.

The etiology of interstitial calcification and nodular growths in the pulp tissue is complex and as yet, by no means, definitely understood by pathologists, nor is there any definite diagnosis to determine their earlier or later development in the tooth tissues.

If the scientific treatment of carious cavities is carried out, especially where large areas of dentinal tissue are involved, nerve capping should be resorted to, in order to create a growth of secondary dentin, so that the functional activity of the pulp will not be enhanced, and also aid in preventing any degenerative changes, which are liable to occur in that organ.

Case in Court

S. W. FRAWLEY, D.D.S., TORONTO.

Miss Ruth McFarlane, of Toronto, Ontario, brought suit against Dr. S. L. Frawley for \$5,000 damages for fracture of the lower jaw, during the extraction of a lower impacted third molar, on August 11th, 1923. The case came to trial in the Supreme Court of Ontario on Nov. 6th, 1926; before Judge Mowat.

The plaintiff was the first to give evidence, which was not very damaging to the defendant, as she admitted that she told the defendant, after recovery, that if she had fifty jaws she would have them all broken for the great relief derived from the removal of the impacted tooth.

The next witness was Dr. Chalmers, who was subpoenaed to Court by the plaintiff. The evidence given by him was all in favor of the defendant, by explaining the difficulty in removing an impacted third molar when at the angle this tooth had developed. He was sent back to his office for records of the extraction of an upper right second molar which he had done for the plaintiff.

The next witness was Dr. Risdon, subpoenaed by the plaintiff. His evidence was again in favor of the defendant by showing that fractures might go for several days without being detected, as he himself had, on a number of cases, been deceived by them.

At this point, 4:30 p.m., the Court adjourned.

The Court opened on Nov. 7th, 1926, at 10:30 a.m.

Dr. Chalmers was again called to the witness box and on being asked if he had brought the records of the extraction, answered that he had, but had not brought his subpoena. When asked by the Judge why he did not bring his subpoena, he re-

plied, there was nothing on it stating that he was to bring anything at all. When the Judge learned he had not been properly subpoenaed he told the plaintiff's counsel that the next time he subpoenaed a witness to do it properly. When the plaintiff's counsel asked the witness the next question, he refused to answer until he was given his witness fee. The Judge remarked to him that he could go on and the plaintiff's counsel would see that he got his fee of \$1, but when told by the witness that his fee was \$5 the Judge remarked that if they did not have \$1, they wouldn't likely have \$5, and told the plaintiff's counsel "to dig down, dig down," but he refused to pay the witness, so the Judge dismissed the witness from the box.

The next witness called was Dr. Robb, who was also subpoenaed by the plaintiff. He explained the operation of removing an impacted lower third molar and also brought X-Ray plates to show the position of such a tooth and just how difficult it is to remove an impacted third molar. His evidence was all in favor of the defendant.

This finished the plaintiff's case.

The defendant's counsel arose and said: "I submit there is no case made out against the defendant." His Lordship answered: "I say the same."

The plaintiff's counsel then read part of the defendant's evidence for discovery of his method of removing the molar in question, (but not the whole.) Then he took Dr. Robb's evidence and tried to twist it in a way to show that the defendant did not use the proper method. Dr. Robb, sitting in the Court, got up and objected to having his evidence twisted, whereby

the plaintiff's counsel turned and told him to keep quiet, to which Dr. Robb replied, "Thank you!" but kept on objecting until the Judge assured him the Court would protect him. He also told the plaintiff's counsel, upon appeal, that one would hardly expect a witness to keep quiet when he heard the wrong interpretation of his evidence given, whereby the plaintiff's counsel told the Judge that he had better let Dr. Robb argue the case. The Judge then told him that he didn't want any

more of his impudence, as he was trying to be fair, but knowing his character, he could not stand for too much. To this the plaintiff's counsel answered that his character hadn't anything to do with the case and upon being informed by the Judge that it had, he said he would withdraw from the case. The Judge asked him if that were final and he answered "Yes." The Judge then dismissed the case with costs without any evidence from the defendant's side.

Root Absorption

C. W. SOULES, D.D.S.

The accompanying X-Ray pictures were taken of a man thirty-seven years of age to see if the second bicuspid were lying horizontally in the jaw. But its absence does not appear to me to be the main interest.

I understood that the roots of the temporary teeth were dissolved away by the pressure of the erupting per-

manent ones, the same as the alveolar bone is dissolved away by pressure in moving a tooth in orthodontia. But here we find a temporary tooth with its roots dissolved away when no permanent tooth exists. Does this queer the established theory, or is there an explanation in any way agreeing with it?



Diet for Children

(Continued from Jan. Issue, page 6)

At the age of five a normal child can quite safely be given raspberries (unless an idiosyncrasy for them exists), plums, grapes, melons—in fact almost every fresh fruit—in astonishingly large quantities. I have known only good to result from this practice. One child at five years for weeks at a time ate from one to three good-sized muskmelons daily in addition to various other fresh fruits. He thrived, waxed moderately fat, and immoderately strong and well. Cucumbers and tomatoes may be used in abundance. Tomatoes are actually an excellent variety of fresh fruit. All fresh fruits and vegetables should, of course, be carefully washed and prepared before eating.

It will have been noticed that up to this time no meat has been given. I found this practice entirely satisfactory, with the prescribed liberal amounts of milk and fresh eggs. I believe it could be quite successfully continued throughout childhood—for that matter throughout life. With the school age, however, came a vast curiosity and a desire for what “other children have.” For this reason small portions of chicken or the most digestible meats were occasionally served in place of egg at noon. (Never veal or fresh pork!) Another acceptable substitute was a small slice of brick cheese (about two inches square and cut thin) with the rye bread; a second was a small dish of cottage cheese. A large glass of buttermilk at one meal can frequently replace the milk to good advantage. Both these foods are very good for their germicidal action on the intestine. When the younger child was six and the older nine they ate practically the same kinds and

amounts of food. The program was then as follows:

Child's Meals at Six to Ten Years

Breakfast:

An apple, orange, or other fresh fruit

4 to 7 whole sundried figs

Good-sized dish of oatmeal or other cereal with half milk, half cream

Ry-Krisp and butter or coarse bread and butter, if desired, with a thin “spread” of marmalade or jam. (This usually is desired!)

Lunch:

An apple, orange, or other fresh fruit

Rye bread sandwich, with butter and either baked ham cut thin or brick cheese cut thin

Lettuce or other green salad, or celery, or fresh cabbage salad

1 cup milk, or the equivalent amount of cream soup made with left-over spinach, cauliflower, carrots, or other vegetables. This is especially wholesome on cold days. A fresh egg may take the place of the cheese or the ham.

Supper:

Fresh fruit of some kind

1 cup milk

3 tablespoons cooked fresh vegetable

1 slice rye or other coarse bread, or Ry-Krisp

1 fresh egg, or small portion of fish, meat, or chicken

Light dessert.

A comparison of this evening meal with the menus given for adults will show them to be practically alike. This simplifies housekeeping; ordinarily the children eat with the grown-ups. If guests are expected, the children are given

their simple meal earlier, with tastes of any unaccustomed foods, either then or the next day.

It will also be noticed that I have made liberal use of dairy products, especially milk and butter. They are, perhaps, the cornerstone of the structure, for which there is no adequate substitute. The following is a quotation from a local trade paper:

This is the time of the year when the prices of staple food commodities usually go up. Dairy products, however, form the base or foundation of so many of our dishes that we cannot "skimp" on them very much.

Let us suppose that you take three quarts of milk daily, and then one fine morning the milkman left, *INSTEAD*, one pound of juicy sirloin steak, one-half dozen fresh eggs, three pounds of tomatoes and three pounds of asparagus.

It certainly seems a lot of food to substitute for three quarts of milk, doesn't it, but all this contains the same amount of food and energy value as three bottles of milk.

But did you know that one pound of butter is equal in energy food value to any of the following proportions of food?

4 lbs. beef steak

11¼ lbs. chicken

2½ lbs. ham

11¼ lbs. fish

41 eggs

5½ lbs. beans

13 lbs. peas

32 lbs. tomatoes.

In view of the above figures, don't you agree with us that milk, cream, and butter may still be called "our best and cheapest food"?

I have not troubled to verify the exactness of this representation, for I know it to be essentially true. There are countless illustrations of the value of dairy foods to children. An Englishman, the Hon. R. Russell,

cites an interesting case in his book "Strength and Diet."

In Sir Douglas Galton's inaugural address before the Institute (the Sanitary Institute of Great Britain) he mentioned that in the Northern Counties' Orphan Asylum, the children were singularly free, during the 18 years of its existence, from children's disorders. Each child had a pint of new milk every day. During three months they had received weak tea, and only half the previous allowance of milk; the number of children who were unwell increased beyond what it had been for years, but fell again when the pint of milk was restored.

I do not always agree with Dr. Woods Hutchinson, but he has a telling way of putting things. In an address before the Dental Society of the State of New York in 1925 he made a statement I do agree with, better than I can make it.

We must take an abundance of butter. The more intelligent and independent of our children did not want bread and butter, they wanted butter and bread, and when we handed out one portion, they would lick off the butter and send the bread back for a second spreading. And the wisdom of babes was justified, that butter was full of vitamins.

I wish further to emphasize the absolute necessity for a wide use of fresh fruits and vegetables in children's diet. The curative effects of these foods in rickets and scurvy is familiar to most of us. Less well known has been their relation to growth. Dr. J. F. McClendon and the late Dr. J. P. Sedgwick, of the University of Minnesota, in a recent series of experiments on infants and young children fed on the dried extracts of oranges and spinach (both notably rich in vitamins) obtained results nothing short of astounding. For example, ten babies whose average gain per week had

been 2.3 ounces, when fed on these foods gained 5.7 ounces; eight babies were raised by feeding spinach from an average gain of 2.4 ounces to 10.9 ounces; a ten-month-old infant of normal weight formerly gaining 8 ounces gained in one week on spinach and fresh orange 23 ounces.

Vitamins are further known to have an important function in maintaining appetite. Dr. McClendon writes:

In all animal experiments on a vitamin-deficient diet, loss of appetite occurs. With human beings, psychological factors may enter in so as to make it difficult to perform clean-cut experiments on this subject, yet the final loss in tissue substance in all deficiency diseases suggests that the appetite has been affected. We know that pure proteins, fats, and starches have no taste, but we do not know whether vitamins have flavor. We do know, however, that the taste of milk changes on boiling and the taste of many foods changes by canning and drying. Why is it that some persons have been known to defy the cholera germ for a raw oyster and the typhoid germ for a salad, and to give their lives for a momentary tickling of the palate? There must be some great advantage in fresh foods or else the desire for them would be eliminated by natural selection. To the clothes-moth the age of food seems to make little difference, but when a man sits down to a meal of storage eggs, canned milk, jerked beef, and hard-tack, it requires considerable hunger to whet the appetite. This craving for fresh food has probably saved more lives than are killed by germs.

Baked potatoes are always mentioned for the reasons Dr. Kenneth Haig points out in "Health through Diet":

Baked potatoes are to be preferred to the customary boiled potato for several reasons, not the

least of which is that none of the valuable nourishment and alkaline salts go down the sink, which is always the case when potatoes are boiled in the usual manner. In addition, the baked potato is more easily absorbed, and owing to some of the water having been evaporated in the process of cooking, is more nourishing.

I might add that for the latter reason a properly baked, mealy potato is also less soggy, consequently less constipating.

This program has been objected to on the score of expense. Undoubtedly, like anything else, it can be made very expensive. On the other hand, it can be worked out with the cheaper fruits and vegetables quite as wholesomely as with the more costly. The relatively small proportion of meat—an expensive form of protein—also helps to counterbalance the outlay for fresh fruits and vegetables. Fortunately, moreover, the cheaper meats are quite as nutritious as the choicest cuts, and often more valuable from other standpoints. As I have already stated, liver, kidneys, and other glandular organs are sources of most necessary vitamins. There is no cheaper form of dairy foods; but the saving in doctor's and dentist's bills will more than tip the balance. One year our total doctor's bill was three dollars—and this for a false alarm. The next year it was nothing at all. Our highest annual expenditure has been fifty dollars. This staggering sum covered the whooping cough year with its serum injections. In general, however, I believe that, with normal children, this system of diet builds up so strong a natural resistance to disease that it is more than worth any possible necessary expenditure.

Another proof of its efficacy is the fact that in all the children I know who are on this diet, burns, cuts,

and other wounds heal rapidly and completely. A striking example of this is the case of the young nephew, now eight years old, who once lived with us for a year. This winter he fell violently, face down, on a frozen snowbank and was dragged along with his face scraping the rough, dirty ice. His nose and lips were lacerated, and his mouth badly cut within by his teeth. As a dentist I know too well what frequently happens in such instances. Streptococcus, or other pus infection is often the outcome of such accidents.

With this boy, however, swelling and discomfort for a few days were the only ill effects. A week afterward he was practically over it. I have seen dozens of similar instances, usually on a lesser scale. Small cuts usually heal over night; burns and bruises disappear with astonishing swiftness. This is only a further instance of the same principle—that with proper food normal children cultivate an extraordinarily high resistance to disease. It is impossible to measure a thing so precious in dollars and cents.

State Aid and Private Philanthropy

(This theory is good if the state and benevolent encourage all and sundry to bear children, otherwise those who bear them should rear them.—Editor.)

The children in these homes have a special claim upon our benevolence. Every child has a right to be free from pain, to be well nourished, and to have a fair chance to grow to sturdy manhood or healthy womanhood. But many are denied this privilege because the father is unable to get work, or when working to earn sufficient money to provide even the necessities for the members of his family. Surely such a man has a right to look to society for assistance. This help should be given in an organized way by the state, or when that is impossible, by private philanthropy. Organized society as represented in the Federal, Provincial or Municipal Governments has a great responsibility in this regard, and especially in so far as worthy citizens are deprived of those things which are essential to health and happiness. Private philanthropy can and does do much, but the unfortunate factor in this form of giving

lies in the fact that the full load rests upon the shoulders of those who are public spirited and generous while others just as able to help refuse to accept their share of the burden. When the State establishes a service which provides for the needy, the cost is equally and equitably distributed, and every taxpayer has a part in the good work. But the resources of the State are limited, and many worthy enterprises can not be undertaken. Public funds must be raised by taxation, and when the burden becomes oppressive, it reacts upon the ordinary citizen and often does more harm than the object for which it was raised does good. For this reason students of economics have come to the conclusion that the ideal solution for the problem of providing these things which are essential for all the people is by a combination of state service and private benevolence.

SOCIETIES

Canadian Dental Association, Halifax, 1926

Minutes of the last general meeting, held at Vancouver, read and approved.

Dr. G. K. Thomson, President, opened the meeting and called for nominations for the Executive Council. The following were nominated:

Dr. Harris nominated Dr. W. D. Cowan, Regina, Saskatchewan.

Dr. Magee nominated Dr. W. L. Gillespie, Moncton, N.B.

Dr. Clay nominated Dr. J. M. Dixon, Calgary, Alberta.

Dr. Seccombe nominated Dr. D. P. Mowry, Montreal, P. Q.

Dr. Webster nominated Dr. Harris, Windsor, Ontario.

Dr. Clay nominated Dr. G. S. Cameron, Montreal, P.Q.

Dr. Magee nominated Dr. F. E. Smallwood, Charlottetown, P. E. I.

Dr. Magee nominated Dr. H. A. Croll, Souris, Manitoba.

Dr. Trotter nominated Dr. H. S. Thomson, Toronto, Ontario.

Dr. Beckwith nominated Dr. A. W. Faulkner, Halifax, N.S.

Moved and seconded, nominations close.—Carried.

Moved and seconded, that the President give his address.—Carried.

The President, Dr. G. K. Thomson, presented his address.

Dr. Magee moved and Dr. Webster seconded, that a Committee be appointed to report on the President's address.—Carried.

Dr. McGuire presented the Dominion Dental Council report.

Moved by Dr. Croll, seconded by Dr. H. S. Thomson that all the re-

ports be placed in the hands of the Executive Council. Carried.

The motion to appoint a Committee to report on the President's address withdrawn, and this report to be considered, with others, by the Executive Council Report of the Canadian Dental Hygiene Council presented by Drs. Trotter and H. S. Thomson.

Discussed by Dr. Mowry, who pointed out that we are doing a great deal to emphasize the necessity for the layman taking an interest in Oral Hygiene. An important point which should be associated with this is the necessity for assuring that the individual dentist give the patient treatment in accordance with the recommendations of this Council.

Dr. Wallace Seccombe, in the absence of the President, presented a report on the Canadian Dental Research Foundation. The Foundation suggested that the Bulletins published by the Foundation should only be sent out on receipt of a postal request, in preference to broadcasting them. Dr. Amy suggested that members wishing to obtain Bulletins should pay for them. Dr. Webster approved request idea.

Dr. J. W. Clay presented a report of progress for the Committee on Legislation.

Dr. Wallace Seccombe presented a progress report for the Oral Hygiene Committee of the Canadian Dental Association.

Meeting adjourned.

Minutes, Executive Council meeting Dalhousie University, Halifax 8.30 p.m. August 16, 1926.

President's address considered. Dr. Seccombe moved that the principles of the report be taken up. He felt that one of the most important points in the Report was the recommendation to model the Canadian Dental Association on the American Dental Association. He suggested the advisability of making the Canadian Dental Association an executive body which would maintain international relations and which could speak with authority on dental matters in Canada. Dr. Seccombe moved:—

That the Canadian Dental Association be composed of a Board of Delegates which should meet at least once a year. That general conventions be held from time to time at the discretion of the Board of Delegates and that this Executive proceed to a discussion of the details of the appointment of delegates. The plan to be subject to the approval of a majority in each of the Provinces of Canada before being put into operation.

Seconded by Dr. Faulkner. Discussed by Drs. Webster, Mowry, Clay, Gillespie, Amy, Cowan and H. S. Thomson. Motion carried.

Dr. Seccombe moved that the Board of Delegates be composed of three delegates appointed from each Province. The method of selection to be left to the Provinces. Seconded by Dr. Mowry. Carried.

Moved by Dr. Seccombe, seconded by Dr. Clay, That the question of uniformity of educational standards be left to the Dominion Dental Council. Carried.

Moved by Dr. Magee, seconded by Dr. Faulkner, That the action of the President in obtaining the appointment of Delegates to the International Dental Council by the

Canadian Government be approved. Carried.

Moved by Dr. Cowan, seconded by Dr. H. S. Thomson, That a committee of three be appointed by the Chairman to nominate five Delegates from the Canadian Dental Association to the International Dental Congress. Carried.

The following appointed: Drs. J. W. Clay, W. Seccombe and Mowry.

Dr. Seccombe moved that each man attending the International Dental Congress pay the registration fee of \$10.00 as an alternative to the Canadian Dental Association paying \$1.00 per member. Also that the President explain to the officials of the International Dental Congress the wish of the Canadian Dental Association for affiliation and explain the difficulties of the Canadian Dental Association to finance a per capita tax inasmuch as it has no permanent membership. Seconded by Dr. Amy. Carried.

It was decided that the question of revision of the constitution be held over until the present scheme of organizing the Canadian Dental Association as a Board of Delegates is concurred in by the Provinces.

Dr. Cowan in discussing the report of the Dominion Dental Council recommended that a committee of the Canadian Dental Association with members from Quebec and British Columbia act with the Committee from the Dominion Dental Council to endeavour to have British Columbia and Quebec become members of the Dominion Dental Council. Dr. Mowry stated that a Quebec committee was working on the question at the present time. Dr. Seccombe moved that, in view of the action already taken by Quebec, no committee be appointed by the Canadian Dental Association at the present time and that his Association express its entire approval of the work being done in this respect by the Dominion Dental Council.

Seconded by Dr. Faulkner. Carried.

Report of the Canadian Hygiene Council received and adopted.

Moved by Dr. Seccombe that the recommendations of the Canadian Dental Research Foundation that their Bulletins be sent out only on receipt of a postal request and that a new appeal for funds be made to the dentists of Canada. Seconded by Dr. H. S. Thomson. Carried.

The President appointed Drs. Webster and Faulkner a Committee on References.

Dr. Seccombe moved that, if possible, the new Executive arrange for a Convention next year, provided a suitable meeting-place can be arranged. Seconded by Dr. Clay. Carried.

Meeting adjourned.

Minutes, Executive Committee, Dalhousie University, 9 p.m., Aug. 17, 1926.

Minutes of previous meeting read and approved.

Dr. Webster presented the report of the Committee on References that the recommendations forwarded by Dr. Delabarre be adopted.

Dr. Clay reported that the Committee to nominate the delegates from the Canadian Dental Association to the International Dental Congress had nominated the following:—

Dr. M. H. Garvin, Winnipeg; Dr. W. C. Oxner, Halifax; Dr. F. J. Conboy, Toronto; Dr. J. H. Dohan, Montreal. Moved by Dr. Bagnall that Dr. Clay, Calgary, be nominated as a delegate. Seconded by Dr. Seccombe. Carried.

Chairman then called for nominations for Officers for the Canadian Dental Association.

Dr. Webster nominated Dr. J. W. Clay, Calgary, for President.

Dr. Clay nominated Dr. F. J. Conboy, Toronto, for 1st Vice-President.

Dr. Croll nominated Dr. W. F. Taylor, Winnipeg, for 2nd Vice-President.

Dr. Seccombe moved that Dr. J. Stanley Bagnall, Halifax, be appointed Secretary-Treasurer. Seconded by Dr. Webster. Carried.

Meeting adjourned.

Minutes, General Meeting.—S. S. Lady Laurier, Halifax Harbour, 5 p.m., August 18, 1926.

Minutes of the previous meeting read and approved.

Report of the Executive Committee read.

Moved and seconded that the Report be considered clause by clause. Carried. Dr. Seccombe's motion re formation of Board of Delegates. Moved by Dr. Webster that the Provincial Executive decide how the vote in each Province be taken. Seconded by Dr. Trotter. Carried.

Dr. H. S. Thomson moved that two delegates be appointed from each Province instead of three. Seconded by Dr. G. S. Cameron. Carried.

That the question of uniformity re educational standards be left to the D. D. C. Carried.

That the appointment of the Canadian Government delegates to the International Congress be approved. Carried.

That those nominated as delegates from the Canadian Dental Association to the International Dental Congress be hereby appointed. Carried.

That the Constitution be not amended until the Provinces vote on the scheme for forming a Board of Delegates. Carried.

Recommendations of the Canadian Dental Research Foundation re sending out Bulletins and appeal for funds be approved. Carried.

That a meeting be held next year if it can be arranged. Carried.

Election of officers.

Dr. H. S. Thomson nominated Dr. A. W. Thornton for President, Dr. Thornton withdrew. Dr. Clay declared elected.

Dr. Webster nominated Dr. F. Barbour for 1st Vice President.

Dr. Barbour withdrew. Dr. Conboy declared elected.

Dr. A. E. Webster nominated Dr. M. H. Garvin for 2nd Vice-President. Election held and Dr. Garvin declared elected.

Dr. Webster conducted Dr. Clay to the Chair.

Dr. Webster moved that the present Oral Hygiene Committee be reappointed. Seconded Dr. Mowry. Carried.

Dr. Webster moved that the present Research Committee be reappointed. Seconded Dr. H. S. Thomson. Carried.

The Secretary was asked to send the necessary votes of thanks to those who had assisted in the entertainment of the delegates to the Convention.

Moved by Dr. Dohan that an invitation be extended to the American Dental Association to hold their 1928 meeting in Montreal. Seconded by Dr. McGuire. Carried.

Dr. H. S. Thomson moved that the Executive be empowered to remunerate the Secretary as done in former years. Seconded by Dr. Trotter. Carried.

Meeting adjourned.

Minutes Executive Meeting, Dalhousie College, Halifax, 11 a.m., August 19, 1926.

Dr. Magee moved that Dr. J. W. Clay take the Chair.

Minutes of the previous meeting read and approved.

Dr. Thomson moved that the Secretary be instructed to forward, as soon as possible, a copy of the Minutes to each Member of the Executive. Seconded Dr. Harris. Carried.

Dr. Thomson moved that the Secretary be instructed to forward to each Provincial organization a copy of the Resolution relating to the appointment of two delegates for the purpose of carrying out the provi-

sions of the Resolution, and before doing so to consult with the executive, and that this motion be accompanied by an explanation. Seconded by Dr. Croll. Carried.

Dr. Dixon moved that the time and place of the next meeting be left to the discretion of the elected officers. Also that the business until the next meeting be carried on by them. Seconded by Dr. Smallwood. Carried.

Dr. Croll moved that the President, the two Vice-Presidents, the Secretary and Dr. Cameron be the Finance Committee. Seconded by Dr. Magee. Carried.

Dr. G. K. Thomson suggested that Dr. Willmott be asked to forward report of the Necrology Committee for publication with the Proceedings.

Dr. G. K. Thomson moved that the appointment of the Committee on Arrangements be appointed by a committee consisting of the elected Officers. Seconded by Dr. Croll. Carried.

Dr. G. K. Thomson moved that the Committee on Dental Legislation be reappointed. Seconded Dr. Croll. Carried.

Dr. Mowry moved that Drs. A. E. Webster, J. M. Magee and G. K. Thomson (Chairman) be appointed Committee on Foreign Relations. Seconded Dr. Harris. Carried.

Dr. Croll moved that the Committee of Elected Officers appoint the local committees of Programme, Exhibits, etc. Seconded by Dr. Harris. Carried.

Dr. Magee moved that Drs. Du-beau, Emery Jones, G. K. Thomson, Bulyea, Seccombe, A. W. Thornton, (Chairman) be appointed a Committee on Education. Seconded by Dr. Mowry. Carried.

Dr. Magee moved that the Secretary send a letter to Dr. Bradley expressing regret at his inability to

attend and the hope for his speedy recovery to health. Seconded by Dr. G. K. Thomson. Carried.

Dr. Faulkner moved that the present auditors be reappointed. Seconded by Dr. Croll. Carried.

Dr. Magee moved that the Secre-

tary be granted an honorarium of \$250.00 for his services during the past two years. Seconded by Dr. Harris. Carried.

Motion to adjourn.

—J. Stanley Bagnall, Secretary
Canadian Dental Association.

Academy of Dentistry, Toronto

Minutes of the Fourth Stated Meeting of the Academy of Dentistry, Toronto, Season 1926-27, held in Osler Hall, 13 Queen's Park, on Monday, January 3rd, 1927.

The meeting opened at 8:10 p.m., with the President in the chair.

The minutes of the second and third stated meetings were read and confirmed.

In accord with the notice of motion included in the notice of this meeting Dr. Fisk moved, seconded by Dr. Black, that Art. 1X., Sec. 2, of Construction which now reads:—

Art. 1X., Sec. 2. "Each Fellow may nominate one member for each office and four members for Councillors" be changed to read:—

Art. 1X., Sec. 2. "Each Fellow may nominate one member for each office. One Councillor shall be nominated and elected by and from the Fellows practicing in each of the four districts into which the city is divided, as follows:—

(The boundaries to be determined by a Committee to be appointed by the President and to be included in the Constitution.)"—Carried.

The President appointed the following Committee:—Chairman, Dr. W. E. Willmott and Drs. A. Day, T. E. C. Butler, W. C. Smith, and J. O. Wilson.

Drs. Willmott and Hord were appointed to act as scrutineers at the ensuing election upon recommendation of the Executive Council.

The President then outlined the programme for the balance of the year, as follows:—

January 24th—Clinic Meeting.

Full Dentures—Dr. Bothwell.

X-Ray Interpretation—Dr. R. M. Box.

Indirect Inlays—Dr. A. S. Thomson.

Gold Crowns—Dr. R. S. Woollatt.

Exodontia—Dr. B. R. Gardiner.

February 16th—Essays by Dr. A. E. Webster, and Dr. T. Cowling.

March 16th—Closing Meeting—Dr. Kirk, Philadelphia.

The President then introduced the speaker of the evening, Dr. Sim Wallace, of London, England, who presented a comprehensive lecture on "Preventive Dentistry in England and our debt to the Dental Profession of America."

A most interesting discussion was opened by Dr. W. Secombe and continued by Dr. Alan Brown and Dr. Harold Clark. Dr. Wallace concluded in a most happy manner.

A motion of thanks to Dr. Wallace was proposed by Dr. A. E. Webster, and unanimously carried.

Meeting adjourned at 10:30 p.m.

Dental Society of Western Canada

THE ALBERTA DENTAL ASSOCIATION

On January 10th, the Calgary Dental Society were extremely fortunate in having as their guest Dr. J. Sim Wallace. The California State Dental Organization had arranged to have Dr. Wallace visit America in the interests of dental advancement and the Calgary Society had the rare good luck to be on their route. A large turn out showed the appreciation in which Dr. Wallace was held, and after dinner Dr. Wallace gave a splendid address on "Dietetics as Related to Decay of Tooth Structure." In looking back on Dr. Wallace's talk it must have been quite disappointing to those who have jumped from fad to fad along the line of diet but to a dentist interested in a carefully tabulated scientific study of the relation of diet to destruction of teeth in children it was a talk right to the point. A good discussion followed and questions in great number were carefully answered by the lecturer. Later in the evening, Dr. Wallace resumed his journey to California.

The Alberta Dental Board held its mid-Winter meeting in the Palliser Hotel, Calgary, January 10th. Considerable business occupied the whole day and in the evening they were the guests of the Calgary Dental Society to hear the lecture given by Dr. J. Sim Wallace.

COMBINED CONVENTION AT EDMONTON

Our preliminary announcement extended to you an invitation to visit us at our convention time. We, as dentists, realize that dentistry is steadily evolving, and if we wish to continue to be regarded as "One of the chief, if not the chief means for preventing ill-health" (British Parliamentary Report, 1919), then it is

up to us to keep pace with that steady change. That much we owe to our profession, our patients and ourselves. As a means to this end it gives us great satisfaction to quote the following names as our headline clinicians.

Dr. Fred Molt, of Chicago, well-known in Canada and the United States, will give us Oral Surgery and Radiography.

Dr. Robt. Gillis, of Hammond, Indiana, one of America's foremost Prosthetic teachers, will give us practical full denture work.

Dr. Fred Conboy, given a vacation by the Ontario Department of Health to visit our Convention, comes to spread the news concerning Dental Health Service.

Dr. W. I. Ferrier, President of the Washington State Dental Association, is a welcome addition to our group. He comes to represent his State, and is one of the best operators on the Pacific Coast. He will give us gold foil work.

Around these main clinicians we are assembling many helpful hints in the form of clinics in gold foil, inlays, jacket crowns, orthodontia, impressions, etc. This is a series in which one practitioner can talk to another and help over difficulties in general practice. At the time of year we have selected, a motor trip is easy to carry through. You can hardly afford to stay away, and you will be very welcome.

LESLIE McINTYRE,
Chairman of Publicity.

* * *

Clinicians: In order to facilitate the work of the programme groups, please send in your names to Dr. Arthur Rooney, Tegler Bld., Edmonton, Alta.

Ethics: Those of the Dominion Dental Council, or equivalent.

Fees: \$10.00 only.

Academy of Dentistry, Toronto

Third Stated Meeting of the Academy of Dentistry, Toronto, Season 1926-27, was held at the Faculty of Dentistry meeting, 240 College St., on Monday, December 6th.

Two Clinics, each presented twice were conducted by Drs. I. H. Ante and O. S. Clappison on the design and construction of modern bridge-work.

The Clinics were a very valuable contribution to the Academy and were appreciated by a large number of Fellows (over 100 in attendance.)

At the conclusion of the second Clinics votes of thanks were heartily tendered the Clinicians.

Adjournment at 10:30 p.m.

Minutes of the Second Stated Meeting of the Academy of Dentistry, Toronto, Season 1926-27, held in Osler Hall, Queen's Park, on Wednesday, November 10th, 1926.

The Meeting opened at 8:10 p.m., with the President, Dr. H. G. Robb, in the chair.

The minutes of the first stated meeting were read and confirmed.

The President made announcement regarding the formation of Study Groups and outlined the programme for the remainder of the Season. He then introduced Dr. J. G. Meisser, of Cleveland, the essayist of the evening.

Dr. Meisser delivered an illustrated lecture on the subject "Dentistry in Relation to Systemic Diseases," and being mainly a record of some of the research work carried on in collaboration with Dr. Rosenow of the Mayo Clinic, Rochester, Minn.

The essayist was given the closest attention by the large audience of Fellows and also visitors from the Academy of Medicine and the number of questions asked and answered by Dr. Meisser showed the great interest taken in this subject.

A vote of sincere thanks was proposed by Dr. Chas. Pearson, seconded by Dr. H. Clark, and enthusiastically carried.

The meeting adjourned at 10 p.m.

At Last It Is Settled

At a conference of the New York State and Ontario Provincial Dental Authorities held at Hamilton, Ontario, to discuss inter-state dental affairs it was agreed to bring ethical offences to judgment whether committed at home or abroad. Thus if an Ontario dentist offends his

code of ethics by unprofessional advertising in New York State the Ontario authorities will discipline him, and likewise if a New York state dentist offends by unprofessional advertising in Ontario he will be disciplined by the New York state authorities.



Editorial

Editor:

A. E. WEBSTER, M.D., D.D.S., M.D.S., Toronto, Canada.

ASSOCIATE EDITORS:

QUEBEC—Eudore Debeau, L.D.S., D.D.S., Montreal; A. W. Thornton, D.D.S., L.D.S., Montreal.

ALBERTA—Leslie McIntyre, D.D.S., L.D.S., Edmonton.

NEW BRUNSWICK—Jas. M. Magee, L.D.S., D.D.S., St. John.

SASKATCHEWAN—W. D. Cowan, L.D.S., Regina.

PRINCE EDWARD ISLAND—I. S. Bagnall, D.D.S., L.D.S., Charlottetown.

MANITOBA—M. H. Garvin, D.D.S., L.D.S., Winnipeg.

BRITISH COLUMBIA—E. H. Hetherington, D.D.S., L.D.S., Victoria.

ONTARIO—S. Stewart Crouch, D.D.S., Toronto.

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TORONTO, FEBRUARY, 1927

No. 2

Exchanges of International Courtesies

All along the border between the United States and Canada there are evidences of exchanges of international courtesies. In no department of life have these exchanges been more evident than in the profession of dentistry. Canadian dentists have always held prominent places in the councils of the profession at international meetings. In strictly State, Provincial and National meetings foreigners could not be members but were invariably granted the privileges of the meeting and the floor. It has often happened that such visitors were not members of their own state, provincial or national societies and thus did not contribute to organized dentistry.

The secretary of the Ontario Dental Society has completed arrangements with the National Society that membership tickets in a local society will be acceptable in a foreign society, and if such foreign dentist has not a membership ticket he can pay the local annual fee to the foreign society, and thus be accepted as a member of his local society. The amount of his fee thus paid will be transferred to the local society. This scheme removes many unpleasant moments for visitors to neighbouring society meetings.

Delegates to Meet in Toronto

At the Halifax meeting of the Canadian Dental Association a discussion arose on the subject of changing the Constitution. It was seriously proposed to ditch the Constitution and in its place have a house of delegates appointed by the various provincial bodies which would conduct all national and international dental affairs and only holding general dental society meetings at such times as the house of delegates would determine.

It was held by many that it would be unwise to at once destroy the present organization before another was ready to take its place. Many proposals of organization were made only to find difficulties ahead.

The chief reasons for a different form of Constitution as given at the meeting were well reported by the secretary as follows:

- 1—There was a lack of continuity from one meeting to the next.
- 2—No provision was made to carry out routine business.
- 3—Active members were limited to those in attendance.
- 4—No attempt was made to carry out a scheme of regular financial support.

The incoming officers were directed to have each province appoint two delegates to implement the desires of the Association.

Unfortunately the resolutions passed and the directions given the officers were not very clear. None of those promoting the organization along the lines of our neighbours' Constitution seemed to be very clear on how best to do it.

The Constitution provided for everything but the one essential, finances. The proposal was to assess each member of the Canadian profession 50 cts. a year to support the Canadian organization and a resolution was passed asking each provincial board to concur in this plan and if a majority of Provinces agreed it would be so ordered. It did not seem to occur to anyone that perhaps the minority of provinces might not be willing to pay at the will of the majority, or perhaps the Boards of Directors would not wish to make such an expenditure without a plebiscite.

Nor was it made very clear whether it was to be the official organized dental bodies or the voluntary dental bodies which were to appoint the representative provincial delegates to the house of delegates.

The secretary of the C. D. A. has sent out a letter to the various provincial Boards asking them to appoint two delegates to meet in Toronto at the meeting of the Ontario Dental Society in May 16, 17, 18, and 19. We earnestly hope that every province will be present to take part in establishing a national organization which shall be worthy of the country the profession.

The Ontario Dental Society officers did well to father such a gathering and it is hoped that those who come together will forget everything about how it happened and set themselves to so modify the present constitution as will meet present requirements or make a new Constitution and in so doing keep in mind that Canada is a British nation and governed by a British Democratic Constitution. And that every man who pays his fees shall have a chance to vote for the essential officers, the form of constitution he desires, and the manner of expending his money.

Let us send the delegates and trust in their wisdom.

Standards of Dental Practise

Few of the dental profession realize what it is that makes the standards of practise. Still less of the profession realize that it makes any difference to them what the standard of practise is. On every important procedure in practise there is a generally accepted method to follow, and any deviation from this may bring discredit or misfortune. Accepted methods of practise are those which are found in the text-books, reliable current dental literature and teachers in dental colleges. It may be admitted that any or all of these sources of information may be wrong in a given case, but when difficulties arise as in suits of mal-practise it is safer to have followed standard or accepted methods of practise. Be it right or wrong the courts of the land follow the teachings of the colleges and the text-books. Dentists who do not sterilize their instruments, dry dressings and operating equipment and transfer trench mouth from one patient to another are in a poor position to defend themselves against court actions. If a universal broach or file should slip down a patient's throat while a dentist is operating what defence can he make out when it is well known that the teaching of the profession is to have the rubber dam in place or such broaches tied by a long string? What defence has a dentist who does not separate teeth for filling and finishing proximal surfaces if thereby a patient develops periclasia and charges him with having been the cause of the loss of his teeth? What has a dentist to say if he has filled many anterior teeth with amalgam and thereby caused discoloration and loss of oral beauty?

Up to the present time most cases of malpractise in dentistry refer to the surgical part only, but it will not be long until actions will be taken for the loss of dental pulps by improper treatment and the consequent loss of health. More and more as the public become aware of what is good dental practise more and more will they demand it even if they have to go to the courts to get it.

Editorial Notes

Border Cities Dental Club, elected Doctor Lloyd Miller President, Dr. H. L. Smith, Vice-President, Secretary-Treasurer, Dr. O. C. Baker.

Dr. A. F. Walsh, Director of the Dental Clinic in the Montreal General Hospital, delivered a lecture to the Dental Nurses' Association on the advances in dental surgery since Lord Lister's time.

It is thought by some Western Dentists that the name "gnathologist" should supplant the name "dentist."

Spinach, tomatoes and good teeth.
—(J. A. Marshall.)

Color schemes are becoming so important in women's apparel that they demand that their artificial teeth shall be made to harmonize with the various color schemes which they wear. This means, of course, several sets of teeth.

THREE FROM DENTISTRY
Graduates of the Faculty of Den-

tistry, previously unrepresented, will have three members, the four nominated being: William Cecil Trotter, B.A., D.D.S., Toronto; Mitchell Albert Ross Thomas, D.D.S., London, Ont.; Frederick Percival Moore, D.D.S., Hamilton; Ernest Hamilton Wickware, D.D.S., Smith's Falls.

At the first meeting of the Dauphin Manitoba Board of Education for 1927, Dr. H. E. Bewell was elected Chairman for the tenth year. Dr. Bewell has been a member of the Board for seventeen years.

Dr. Francis Scott Weir has become associated with Dr. W. D. Tracy, 46 West 51st St., New York.

Voltaire said: I look upon solemnity as a disease. Woe to the philosophers who cannot laugh away their wrinkles.

The Dental Society of Western Canada has so far secured Dr. Fred Molt of Chicago on Oral Surgery and Dr. Robert Gillis of Hammond, Ind., on full denture work.

CORRESPONDENCE

Transillumination

February 1/27
DR. A. E. WEBSTER,
Toronto.

Dear Doctor:

The December issue of the Dominion Dental Journal contained a letter boosting the use of special lights in oral diagnostic work and especially that pertaining to the dis-

covery of "blind abscesses" and areas of infection about the teeth.

Being somewhat from Missouri regarding the reliability of such methods in making a positive diagnosis, I obtained the loan of a Cameron Light and a Pelton Diagnostic set, as well as testing two other lights, one weak and one

strong with clear glass globes.

I then obtained a patient who under the trans-illumination test revealed nothing, but a complete radiogram showed one tooth with a large area. Following the extraction of another tooth there was a definite shadow over the socket which was apparently healing quite normal in every way and a radiogram showed nothing wrong. Upon opening the tooth with the area and no shadow I obtained pus. After about three treatments I obtained a dry, clean canal and I filled it. The area is still there by radiogram but at no time has any kind of light given a shadow even though used late at night in a very dark room.

Another case presented having a lower bicuspid with a chronic alveolar abscess from all external appearances and history. The light revealed no shadow whatever. Upon injecting the needle for local anaesthesia pus issued violently and in quantity from the needle puncture. Why did the light not give a shadow?

A case of acute antrum infection will give a shadow to-day and maybe not to-morrow, but again the following day. I saw this case nearly every day though the treatment was in the hands of a physician who was using a Cameron light, and his reports from day to day coincided with my observations.

Why cite more? From what I can learn the shadow is supposed to result from some change in the red blood cells and probably due to oxyhemoglobin.

In conditions where inflammation and pus are present we find an abundance of phagocytes and some serous exudate. Does any change occur in these white blood cells causing them to hinder the passage of light? If they do not change in some way we must depend for the shadow on the red blood cells. This makes a knowledge of the cell

change very important in this work. If the change is due to the oxyhemoglobin what is the exact nature of the change? I would assume that venous congestion gives a shadow and it is due to venous stagnation and heaping up of the red blood cells, as a result of some interference with the circulation.

The light is supposed to aid in the location of tartar. In my hand it does not accurately reveal pockets, and serumal calculus is only shown if it is stained well and in the gingival crevice of practically normal depth. If covered with a $\frac{1}{4}$ in. of loose flabby gingivoe there is no shadow from serumal calculus. Salivary calculus is not shown at all as a shadow unless it is badly stained. Very loose teeth oozing pus show no shadow whatever.

I have an upper central that shows a decided shadow, presumably due to stains from drugs used in the treatment of it, and yet radiograms made consistently over the last eight years have never revealed any kind of an area whatsoever, nor has the tooth been uncomfortable during that time.

I would not wish to trust my dental care to any man who relied fully upon such a method of diagnosis.

I have observed that in examining a mouth with such a light suspicious changes in the soft tissues are more apt to be missed possibly due to the uneven lighting and the contraction of the pupils of the operator's eyes.

This is only my experience with such an outfit, and I am open to more learning, but I want the truth, and adequate proof before I can say "that tooth is O. K." I deem it just as negligent to kill a man by leaving infection in his mouth through ignorance as to give him too much gas and put him away.

What do you think?

Yours truly,
H. D. MORRIS.

Paintings by Dr. V. Rondeau, Rouleau, Sask.



These paintings are similar to those the doctor prepared for the Dept. of Health of the Saskatchewan Government.



This is one of Dr. Rondeau's oil paintings which was shown at the art exhibition, Regina, Sask.

SELECTIONS

The Danger of Sepsis About the Lips

During the war, I was treating a young officer for a wound in his arm. He cut a small septic pimple on his lip while shaving; acute general sepsis followed, and he died in a few days.

When visiting Amsterdam in the summer of 1925, I saw with Professor Noordenbos and a local practitioner, a patient with a small carbuncle in the region of the lower lip. The carbuncle had been partially opened, and some pus was escaping from wound. She developed acute thrombophlebitis which reached the cavernous sinus. The temperature was high, the eyeball on the infected side was protruding, and at the time of the visits, she was passing into a moribund condition.

On my return to Dublin, my colleague, Dr. Lane, told me of a case which he had just seen in which a septic focus in the chin was followed by rapid sepsis and death.

A fourth case I was asked to see during the present year.

These four cases emphasize the fact, so rarely commented on in recent text books, that septic foci in the neighborhood of the lips should be regarded with fear and respect.

As a result of the first case mentioned, a communication by Martin* on "Infections of the Face or Lips" was referred to in the *Medical Annual*, 1925. The teaching is recalled that infections of the face may prove serious on account of the anastomosis of the superior ophthalmic vein with the facial at its origin at the root of the nose. Thrombophlebitis

reaches the cavernous sinus by this channel.

There is no reason to suppose that the infections are of unusual violence, and we know that lacerated and contaminated wounds of the face heal with unusual rapidity. Nevertheless, spreading thrombophlebitis follows furuncles of the lip more frequently than elsewhere.

There is a rich venous plexus in the lip, and under certain conditions the products of septic infections extend from this venous plexus into the collecting venous trunks, which in turn flow into the facial vein at the level of the nostril or lower border of the orbit. The rest which is essential in the case of septic thrombophlebitis elsewhere, cannot be obtained in the case of the lips, and thus infected thrombi are pumped onward.

Martin states that case history after case history tells the same story. A small furuncle with redness and swelling, usually of only one or two days' duration, is pricked or squeezed. A small wound may be made and enlarged with a blunt instrument. After each incision the patient grows worse. The small wound made in the connective or muscular tissues of the lip is almost certain to sever or nick one of the small veins. The blood escapes only partially, and this stagnated blood in an area which is infected furnishes an excellent culture medium for bacteria. It has been shown that under such conditions the potency of staphylococci is increased enormously. Early incisions into septic foci about the lips

*Ann. Surg., 1922, July 13.

are dangerous, and the danger is increased if the small exit thus made is packed with gauze to prevent bleeding. Local anaesthesia should never be used. The rule should be to wait as long as possible, and then when incision becomes necessary, to use a sharp knife, and above all, avoid pressing and squeezing, or the pushing of blunt instruments into the septic tissue in the search for pus.

The treatment in the early stages should consist of injections of colloidal manganese or stock vaccines as recommended by Spaar. (1) Locally the application of magnesium sulphate paste, as recommended by the late A. E. Morrison is indicated. (2) The paste is so hygroscopic that if exposed to the air it rapidly absorbs moisture and becomes fluid. Applications of a 20 to 40 per cent. solution of magnesium sulphate, as recommended by Alston (3) may be applied as an alternative, and a sucking glass as recommended by Bier may be found useful.

Recent reports on the effects of intravenous injections of mercurochrome suggest that a trial at "blood sterilization" might be worth while, if the infection shows signs of dissemination.

Lanz (4) relates some experiences in connection with furuncles of the lip while he was working as one of Kocher's assistants. One of the assistants developed such a furuncle, and during the absence of Kocher it was incised by one of the other men. Four days later the patient died of pyaemia. A day later a second assistant, who had attended the patient, developed a sore throat; three days later he also died of pyaemia. *Staphylococcus aureus* was found on culture. "Furuncle of the lip," says Lanz, "is to be considered a serious condition from the very first moment."

The note of danger sounded by

the old writers has been forgotten in recent years. Treves (5) states that carbuncle of the lip is always a formidable condition, and not infrequently causes death. The clarity of his description of the normal course of the condition is characteristic. He concludes by saying that "unfortunately, however, in many cases infective thrombophlebitis of the veins of the part occurs, spreading from the rootlets of the facial vein to those of the ophthalmic veins (the free intercommunication between these veins near the inner angle of the eye is well known), thence involves the intracranial blood sinuses and gives rise to septic meningitis, septicaemia, or pyaemia."

The late Mr. E. H. Taylor (6) points out that the facial vein has two very important communications which bring it indirectly into connection with the cavernous sinus. The first is the ophthalmic vein, the second is the deep facial vein which runs to the pterygoid venous plexus. This latter is connected with the cavernous sinus by veins which traverse the foramen ovale. He states that these connections are of considerable importance on account of the serious consequences which may follow in the event of their becoming affected with spreading thrombosis in the course of acute septic processes. Under such conditions infection may spread intracranially by way of the ophthalmic vein or by the pterygoid venous plexus, setting up an acute septic thrombosis in the cavernous sinus, and meningitis.

(1) *Med. Ann.*, 1923

(2) *Brit. M. J.* 1924 i, 703.

(3) Alston, *Brit. M.J.*, 1924, i, 765.

(4) *Surg. Gynec & Obst.*, July, 1921, Abstract.

(5) *System of Surgery*, 1896, vol. ii.

(6) *Applied Anatomy*, 1904.

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Prof. Barker, John Hopkins University, on Research

It would seem to be timely to call a halt to such reprehensible pseudo-research and to emphasize strongly the "moral turpitude" of those who engage in it, for they sometimes mislead the public and the less well-informed members of the professions to have faith in the deductions derived from it. Investigative work, to be of value should be well devised, must as a rule be slowly and painstakingly conducted even by workers who are competent, and ought to be rigorously controlled by those who have a right to be regarded as authoritative persons in the domains with which the researches deal.

Please do not misunderstand me; I am not disparaging the ambition to promote knowledge by scientific research. Far from it. The desire to expand the confines of human knowledge is not only laudable; it is one of the finest and highest of human aspirations. Nor am I objecting to the scientific use of the imagination. On the contrary, all great research is the product of minds that brood over facts that have been collected and suitably arranged in the hope that solutions of problems on which they bear may occur to the intellect, and that ideas for further observational or experimental work may be aroused that will either corroborate or refute such tentative hypotheses of solution as may be entertained. But the intellect and the imagination must be of a sufficiently high order and must be rigorously disciplined if reliable results are to be gained. By younger persons, such discipline is best obtained through working in contact with and under the close supervision of investigators who have already won their spurs. The latter

occasionally work alone, but most of them are members of groups of scholars in universities, in well-known research institutes, or in departments of the better professional schools. The novice in research will do well to work directly under such experienced investigators if this be possible for him, and even those who have passed the novitiate will be wise in submitting problems, methods, findings and interpretations to competent authorities for approval before rushing into print with them.

The true scientist feels a grave responsibility in indorsing and in supervising workers of less experience than himself, and will often save them from situations that are potential of humiliation for them and of harm to science and to the public. Work that has been adequately controlled by such true scientists and that has been published with their approval, rightly wins the confidence of other workers in the same fields. The best may make mistakes but they will be fewer and less serious than those of less ability and experience.

A research in internal medicine that has been supervised and approved by Frank Billings, William S. Thayer or Rufus Cole immediately inspires confidence in its results; an original inquiry in physiology that is pursued under W. B. Cannon, A. J. Carlson or J. J. McLeod commands respect; a study in pathology that has been carried out under the direction of William H. Welch, or Ludwig Hektoen or of Eugene Opie will not be questioned; and an investigation in bacteriology that has the sanction of Simon Flexner, of Hans

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I mention by way of illustration only a few names of a large number that might be cited. You will know better than I the names of dental investigators that might similarly be used as examples of men competent to formulate problems, to devise methods and to control interpretations of findings in dental research. And I would take this opportunity to plead that from this time forward we set our faces strongly against the pseudo-research that is irresponsibly undertaken by those who are unfitted for it, that is haphazardly and inaccurately conducted, and that arrives without adequate control at

conclusions that are dogmatically asserted, to the degradation of science and to the misleading of the great public that true science strives to serve. And let us support to the utmost the efforts of those who work diligently, faithfully and intelligently, according to the canons formulated for our guidance by such men as Descartes in his "Discours de la Méthode," Huxley in his "Method and Results," Gore in his "Art of Discovery," Karl Pearson in his "Grammar of Science," and John Dewey in "How We Think," canons that were closely adhered to by men like Louis Pasteur, Robert Koch and Walter Reed, who developed the true scientific habit of mind!

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Dominion Dental Journal

Vol. XXXIX

TORONTO, MARCH, 1927

No. 3



The Late Dr. J. F. Simpson.

ORIGINAL COMMUNICATIONS

An Impacted Supplemental Incisor

HAROLD CAMPBELL, D.D.S., TORONTO.

Miss B., age 32, clerk, presented Jan. 30, 1926, with poorly fitting crown on left upper central, which she wished to have replaced by a new crown of better appearance. The history showed that her teeth had been slightly irregular in childhood and that that particular tooth had erupted labially. A dentist had endeavored to correct the irregularity and although other teeth had come to normal relations, this one had not come far enough lingually to be in line; and about fifteen years ago, part of the crown of the tooth had been cut off and replaced by a Richmond Crown in an effort to improve the appearance. This crown had become elongated somewhat since then. Other teeth were in excellent condition. Patient's general health was fair, but she complained of occasional nervous spells "or periods of depression."

Radiograph No. 1 taken the same date shows not much root-filling, and impacted supplemental central in area. The impacted tooth was apparently a well-formed one with wide crown mesio-distally, and an attempt

to bring it down after extracting the root would probably result in damage to the tissues of the approximating teeth if it were possible to get it down at all. Therefore it was decided to treat the root, get it healthy if possible, and then remove supplemental tooth, at the same time amputating end of root if that were found necessary.

The root was treated from Feb. 23 to Mar. 9. Opening through the apex produced a slight flow of pus, which continued for several days but then stopped, and root was finally filled with neo-balsam and gutta percha cone on March 9.—picture No. 2. (Two openings apparent at apex).

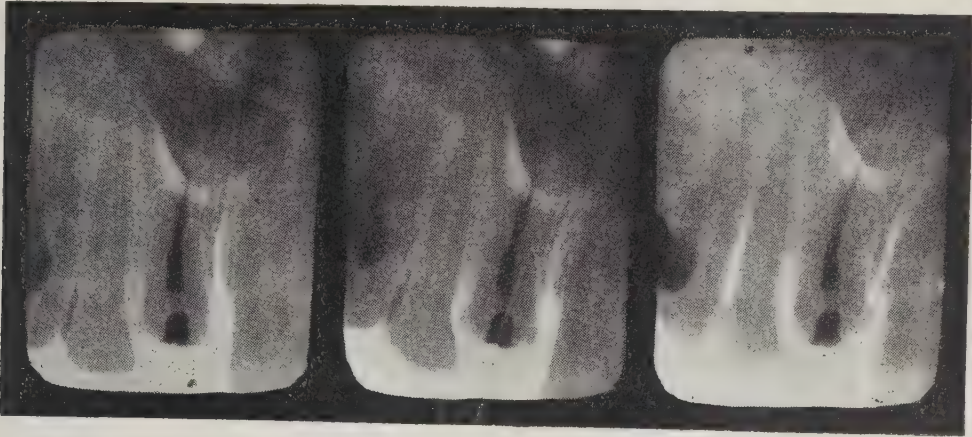
On March 18, tooth was removed labially by Dr. Frank Jarman, and as the root-end which could be seen through the opening looked clean and smooth, it was left alone. Impacted tooth was a perfectly formed left central. Case healed satisfactorily but patient complained of increased periods of depression and general nervous reaction. Her physician advised removal of root, but this was strongly



No. 1

opposed, and in two weeks' time, these troubles had disappeared and patient was back to normal health.

position of the root it was difficult to get a natural appearance, but by grinding the gingival end of the steel

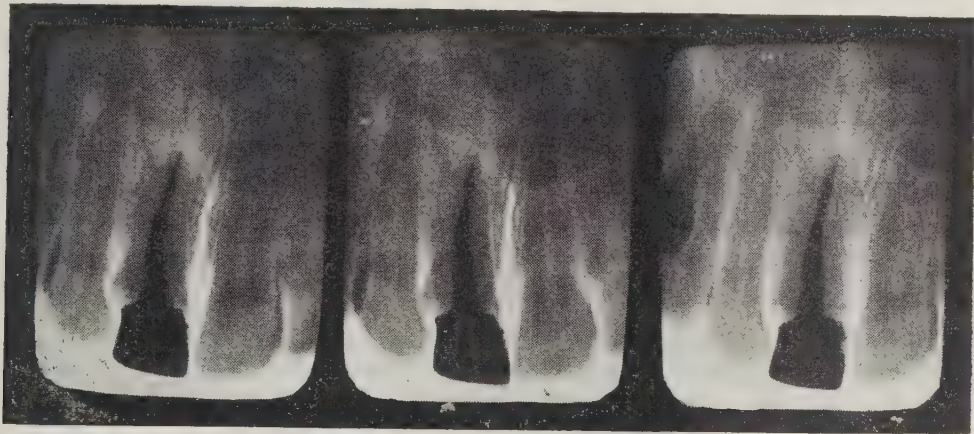


No. 2

The old crown was kept in place with temporary stopping for three months, and then another picture (No. 3) was made which showed a satis-

facing to represent recession, a fairly good result was obtained.

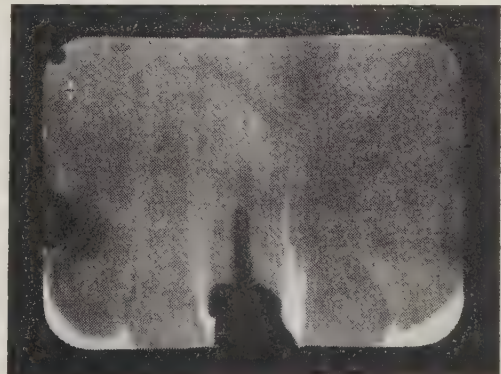
Radiograph No. 4 taken a year after the removal of the tooth, shows



No. 3

factory condition at apex; and a new crown was made and placed on July 10. Because of the somewhat labial

good condition, and patient reports that she has been in better health and spirits than for years.



No. 4

A Scientific Method of Recording the Findings of a Mouth Examination

S. J. ROWLEY, D.D.S., TORONTO.

A complete examination of the mouth and teeth is a matter of considerable difficulty. The necessity that such an examination be thorough cannot be emphasized too greatly. One cannot expect to do justice to his patients or to himself, unless this preliminary step toward treatment is accomplished in a satisfactory manner.

There are many systems of records available to the profession, none of which provide adequate and simple provision for the complete registration of the appearance of disease.

The dental practitioner then, has been seriously handicapped, his service has decreased in effectiveness toward prevention. Only as he learns to recognize and record accurately the apparent pathology can his service increase in value. Any systematic plan of handling and rechecking cases, cannot fail in calling the attention of the patient to a correct appreciation of the service rendered with the result that they themselves become more earnest in the care of their mouths.

My inability to obtain a chart comprehensive enough to allow for an accurate record of the pathology that may occur, prompted me to study this problem, with the result that I have had made for myself the following chart to which has been adopted a code based upon the writings of the late G. V. Black, vol. 1 and 2.

DESCRIPTION

A. Sides of Face.

The perpendicular double line in the centre of the card represents the MEDIAN line of the face, dividing it into the right and left sides. The

patient's right side of the arch, both upper and lower, is recorded on the left side of the chart, as in the majority of positions assumed while at the chair, the patient's right becomes the operator's left.

B. The Arches.

The horizontal double line in the centre of the chart, represents the division of the lower arch from the upper.

C. The Teeth.

The elliptical figures numbered from 1 to 8 right and left on the upper, and A to H right and left on the lower, represent the teeth in their respective positions in the arch, with their accompanying investing tissues.

D. The Pericementum.

The space between the outer and inner elliptical figures of the chart represents the Pericementum. We refer to this area as the pericemental space. Fig. A.2 and 7.

The affections of the pericementum and alveolar bone are recorded by the symbols or figures as suggested in the code.

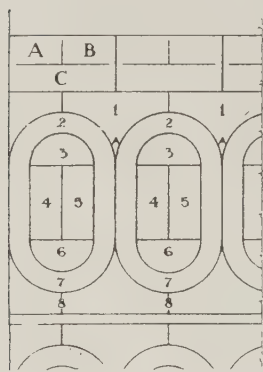
E. The Gingivae, Gum Tissue and Contact Point.

The point of proximate contact "Labially or Buccally" of one elliptical figure to another, represents the contact point of the teeth, Fig. A.1a.

The area immediately above the contact point to the level of the wings of the ellipses, represent the "Septal Gingivae, and the continuing Gum Tissues, Fig. A.1."

The positional variances of the contact point; the pathology of the "Sep-

ENLARGED SECTION OF DIAGRAM AND DEFINITION OF COMPONENT AREAS



A MESIAL BUCCAL ROOT
B DISTAL BUCCAL ROOT
C LINGUAL ROOT

- 1 SEPTAL GINGIVAE AND GUM TISSUE
- 2 LABIAL AND BUCCAL PERICEMENTUM
- 3 LABIAL AND BUCCAL SURFACES
- 4&5 MESIAL AND DISTAL SURFACES
- 6 LINGUAL SURFACE
- 7 LINGUAL PERICEMENTUM
- 8 LINGUAL GINGIVAE AND GUM TISSUE

tal Gingivae and Gum Tissue" are recorded as suggested in the code.

The enclosures above and below the horizontal double line on the chart represent the "Lingual Gingivae and Gum Tissue." Fig. A.8.

F. Surfaces of the Teeth.

The inner elliptical figures of the diagram represent the teeth themselves. Fig. A. 3-4-5-6. Each tooth is divided into surfaces by the intersection of lines at right angles to each other. These surfaces are known as Buccal or Labial, Fig. A.3; Mesial, Fig. A.4; Distal, Fig. A.5; Lingual, Fig. A.6, and Occlusal.

In these spaces by the use of symbols, it is possible and practical to record accurately the position of any cavity that might occur in the teeth.

G. Pockets and Inflammations.

It is practical to record with accuracy the depth and position of occurrence of any pericemental pocket in the space provided on the chart, Fig. A.2 and 7 and by application of symbols as suggested by G. V. Black in the accompanying code, it is made both easy and simple to record with precision any pathological and mechanical imperfections.

H. Root Canals.

The rectangular figures directly above each elliptical figure represent the root canals. They are divided where necessary to accommodate the various roots of the teeth.

J. The attention is brought to the operator that the code suggested may not necessarily be used. He may adopt a code to his particular needs and convenience.

The following code is merely suggestive, the operator may adapt one to his particular needs, and conveniences:

1. GENERAL SURVEY.

Occlusion—Class.

General condition of teeth to decay—Good, Immune, etc.

Mucus Membranes—Good, Fair, etc.

General condition of mouth (cleanliness), Good, Fair, etc.

2. SYMBOLS OF CAVITIES.

Simple occlusal or pit cavity

Smooth surface cavity

Mesial cavity

Distal cavity

Mesio occluso cavity

Disto occluso cavity

Mesial or Distal lingual cavity

Incisal step cavity



3. PERIODONTAL PATHOLOGY

Depth of Pocketsby millimetres

Recession by millimetres

Traumatic Occlusion

....."to" on teeth affected

Uneven Occlusal wear

..... "un" on teeth affected

Vitality tests

..... "N.V." non-vital, "N." normal

Radiograms ordered "R."

Extractions "X."

- Digital examination Absorption or Pus
4. PATHOLOGY OF DENTAL PULP.
- Pulpitis by P.
- Treatment by T.
- Normal by N.
- Hyperemia by H.
- Exposed and alive by E.
- Non-vital by N.V.
- Acute Alveolar Abscess ... by A.A.
- Chronic Alveolar Abscess .. by C.A.
- Previous Root Filling by R.F.
5. INFLAMMATION OF GINGIVAE
- Open contact, no inflammation by 16.
- Open contact, inflammation by 17.
- Salivary Calculus by 18.
- Serumal Calculus by 19.
- Lack of contact of teeth by 20.
- Improper contact of teeth by 30.
- Deviations of contour (crowns, fillings, etc.) by 40.
- Abuse in previous dental operations by 50.
- Lack of cleanliness by 60-64.
- Good, 60, Fair, 61, Medium, 62, Bad, 63, Filthy, 64.
- Injuries due to mouth Hygiene technic by 70.
6. OPERATIONS.
- Missing tooth 
- To be extracted 
- To Be Radiographed 
- To be Crowned 
- Bridge 
- Partial Denture 
- Full Denture 
- Pontic 
- Regulation of teeth 
- DECIDUOUS TEETH.
- To denote Deciduous Teeth draw straight line through figures 6, 7, 8, upper right and left and F. G. H. lower right and left. This leaves 20 teeth remaining, the deciduous teeth. Again a small letter D may be placed in the space designed for Root Canals.
- *The basis of the above code has been taken from the writings of the late Dr. G. V. Black, of Chicago.

*Diamond Jubilee Convention at the King
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18, 19, 1927*

*The Canadian Dental Association at the Sixtieth
Anniversary of the Ontario Dental Association.*

*A Cordial welcome will be extended to guests
from the United States.*

Facing the Setting Sun

MARK G. McELHINNEY, D.D.S., OTTAWA, CANADA.

The present-day students of Dentistry should be thankful for the advantages which they enjoy.

Fine buildings, splendid equipment and a teaching staff second to none is their portion.

We had one lecture room, a small chemical laboratory, very sparsely equipped, an infirmary with a half dozen chairs and a dental laboratory, which included a foot-power polishing lathe, an outfit for getting up dies for gold-work and an antiquated vulcanizer.

We had asked repeatedly for a new vulcanizer but without avail. One Saturday afternoon, Chittenden and I were in the lab. and suggested bedeviling the old crock. We filled it up with plaster and screwed it down to the limit. On Monday there was the devil to pay in the matter of an investigation. We acknowledged the corn and were made pay the damage. Anyhow, shortly afterwards, we got a new vulcanizer and I hope that all ill-feeling has evaporated.

At that time, a good room for one could be had for a dollar and a half, for two, two dollars. Board ran about two-twenty-five a week. Beer was ten cents a quart and a quart of good whiskey cost eighty-five cents. A quart of native port cost thirty cents.

In spite of the cheapness, there was little drinking amongst our men. Being few restrictions, there was no incentive. There were bars all over the place but most of us needed our money for other purposes.

Most of the students were not any too well heeled and graduation was a vital matter. We nearly all smoked, some chewed, and a few took an occasional drink. It was rumoured that

some were interested in the ladies. At that time, Toronto possessed a morality inspector named Archibald, who, in common with most moral reformers, made up in zeal for what he lacked in knowledge and judgment. In an evening paper he boasted that he had cleaned up every house of ill-repute in the city. Next morning, someone covered the blackboard with addresses of going concerns and we all knew that there was one across the street from the college. This is no reflection on the boys as such knowledge was common property. Stewart Edward White in his stories of Africa remarks upon the marvellous rapidity with which news travels amongst the natives and we all know how it spreads in a village so probably the same primitive process is common to all.

Compared with today, our range of operations was small. Extraction, gold, silver, cement and gutta percha fillings; gold, rubber and celluloid dentures; gold and porcelain crowns and occasional bridgework. There was some attempt at orthodontia and Rigg's disease was more a name than a reality. Gold work was confined to the fortunate few in the larger cities. Most of the students had not seen a gold plate or a crown made. The teaching of technique was unheard of. Excepting for the so-called Electric Vibrator where a secondary current was applied during extraction, electricity was unknown.

If a dentist who passed on in 1888 could come back now, he would not know what one-quarter of our modern appliances were for.

I made a vibrator for Sylvester Moyer and we had a heap of fun trying it out on extraction patients in the

infirmary. We took notes of their reactions. The most sensible answer was from a railroad engine driver. "Did it hurt?" "I did not feel it much." "What do you think of it?" "A good, swift kick in the pants would have been about the same?" He was a logical thinker.

We were not without amusements. Occasionally, we would "slope" a lecture and march in good order around town for an hour. The professors who, in their ripper wisdom, evidently understood this small ebullition of mob-psychology, smiled and forgave.

There were but two classes, seniors and juniors, and once in a while there was a good-natured scrap between them. No one was hurt although it messed things up a bit.

The older I get, the more grows my respect for college professors. They have to deal with much youthful egotism and ignorance and there are times when recollection makes me bow my head in shame when I recall how much of that unuseful commodity I personally supplied.

I suppose that some of my classmates have felt the same way but there is one compensating thought; without egotism and ignorance we would not have tackled the job. Evidently, the professors understand this and sometimes winked at each other in passing. My hat is off.

I have never been a college professor but I would like to be one for just long enough time to get back at myself as a student. What Chair? Student psychology. No such exists. What matter? I could create it being a psychologist of parts.

I think that I was the only dental student who possessed a bicycle and that gave me the entry to the Toronto Bicycle Club and the Wanderers. The late Howard Chandler was captain of the Torontos and that explains why I stood in so well with the S. B. Chandler concern which was then the premier dental supply company in Can-

ada. I had many a good ride with the Torontos whose hospitality was without limit. I recall some names. Harry Ryrie, Fred Whatmough, A. E. Webster, Victor Lee, C. Langley, J. S. Brierley, Geo. H. Orr and many others.

If any of these still live and see this writing, I would like to exchange greetings before the curtain falls.

This is apart from dentistry but let it go. The world is small. There was a chap named Allen in my year. He came from Mount Forest. He was a good head and we all liked him. Last June his nephew was married to my youngest daughter. So far, I have had no reason to regret this relation with my old schoolmate. If he reads this, let us say, "shake."

Some of the present students in Dentistry may read these lines and I wish to press the fact that the contacts which they make at college are the most valuable of their assets.

Whether they succeed or fail, they will find that their old classmates are their true friends. I had a letter the other day from Dr. Trigger, one of my classmates and he reminded me that I was poet laureate in my time. I happened to write the songs for the big dinner. I have written much since then but the fact that Trigger remembered is more to me than all the cheques that have come in for literary work. Dentistry is a great profession, great in hope and great in accomplishment. Lately, it has been bedevilled by certain half-baked medical men who were at a loss in the matter of diagnosis but we shall survive that and rise triumphant over the so-called curse of crown and bridgework. A crown or bridge that gives service for thirty years is no failure. We have to die of something. We all make mistakes, that is human, but, in the main, we win out. Otherwise, how could I have been assistant to Dr. Alex. Martin and later partner, and dentist to four Governors-General of Canada.

Actinomycosis

FULTON RISDON, F.A.C.S., M.B., D.D.S.

Read before the Academy of Medicine, Christie St. Hospital, Toronto, Jan. 25th, 1927.

In view of the fact that a number of cases of Actinomycosis have come under observation, and as it is a disease that is frequently overlooked, we beg to report the following:

The patient is a man aged 29, well developed, and other symptoms negative. In 1917 he was admitted to Seaforth Camp, England, with the following history:

Two weeks previously he had developed a pain and subsequently swelling in the lower left jaw. Two days later the lower molar tooth was removed, but apparently the tooth was negative as to infection or source of pain. Pain and swelling increased and in five days the fluctuating point in the submaxillary region was opened and drained, but this had to be repeated several times and the face became more swollen and indurated along with increased areas of softening. One month from admission the pus showed sulphur granules on evacuation of pus, and ray fungus was obtained on microscopic examination.

Since that time he has had the indurated mass opened and drained 27 times. Most of this time he has been under observation in Canada. He was transferred to Toronto for further treatment in 1926, and now he shows a number of scars in the left neck and cheek, and some areas of softening surrounded by indurated masses above the left ear, but no ray fungus has been obtained since admission. He has a marked trismus on the left side, but is able to separate the jaws to about one-fourth of normal, thus allowing for a modified diet and maintenance of weight.

At one time in his history there is an X-Ray report showing necrosis of the lower jaw and zygoma. This has cleared up completely and now the condition is limited to the soft tissue.

During this time he has been receiving increasing doses of potassium iodide, 260 grains per day, the numerous sinuses have been curetted and treated with silver nitrate, and frequent and prolonged X-Ray exposures have been given. He is now being treated with radium almost entirely, and is to receive six to eight radium treatments a month apart.

Following we give a resume of the literature:

Symptoms: one week to fifteen years.

Characterized by induration and suppuration with ray fungus.

Introduced through mucous membrane of the mouth by the spore found on vegetation, and frequently seen in patients who handle cattle, hay and corn. Lord found ray fungus in carious teeth, and successfully inoculated guinea-pigs. Minges in 1892 fed a white rat with the sulphur granules, developed actinomycosis and kept the rat alive eighteen months with potassium iodide in milk.

Anatomic distribution: 60 per cent. head and neck, 18 per cent. abdominal, 14 per cent. thoracic. All tissue except the esophagus and lachrymal duct. More frequently found in the male,—80 per cent. to 90 per cent.

Occupational: Farmers 73 per cent., laborers, 7 per cent., other occupations about 1 per cent.

Distribution: Upper Mississippi Valley and northwest.

Note: The public should be warned against chewing straw, weeds and grain.

Pathology: Yellowish grains visible to the eye, composed of a mycelium, forming mulberry-like masses with radiating processes. Films segment into spores. Anaerobic cultivations necessary to grow cultures. Widal reaction positive. Causes leucocytic reaction, the fixed cells proliferate to nodules which contain giant, plasma and epithelioid cells surrounded by a zone of leucocytes and connective tissue.

Clinical features: Cutaneous changes rarely primary. The parasite is extruded from the deeper lesions. The cutaneous lesion or nodule is in hypoderm and cutis, pinkish at first, hard, but later softened and discharges serous, purulent or bloody fluid containing yellow grains. Other nodules develop and coalesce until an indurated nodular mass of some size develops with fistulous tracts leading to deeper indurated mass.

Progress: Tends to invade muscle, bone, liver, blood vessels and meninges.

Diagnosis: Nodosity of tumors, chronicity, ray fungus, glands not enlarged, tendency to sinus formation, extending to deep nodular masses.

Differential diagnosis: Dental abscess, more acute and painful. Lupus

Vulgaris, absence of apple-jelly nodules and the character of the pus. Syphilitic Gumma, more acute, tends to break down, shows positive Wassermann. Epithelioma, glands involved, biopsy.

Prognosis: Condition is chronic and tends to be progressive.

Treatment: Potassium iodide in large doses, increasing to 240 grains daily. Vaccines autogenous, one-half million to fifty million, every three to seven days. Incise and scrape sinuses and infiltrate mass with 1 per cent. solution sodium or potassium iodide. X-Ray is of doubtful value according to some authors. Radium of value in breaking down nodules, and in this way clearing up induration.

Report in *Annals of Surgery*, 1925: Sandford and Volker 670 cases, 80 per cent. of whom were males, the youngest twenty-eight days, the oldest eighty-two years. 21 patients aged one to ten years, 71 patients ten to twenty years; median value age incidence twenty to thirty years.

New and Figi report from 1913 to 1922 inclusive, 157 cases,—107 or 68 per cent. head and neck,—two cases in 1913 and twenty in 1922. Of the 107 cases ninety-eight were male.

Treatment: Early diagnosis, radium, and increasing doses of potassium iodide.

30 Avenue Road, Toronto, Ont.

Gas Anaesthesia

GORDON FRAWLEY, D.D.S.

It is our purpose to discuss general anaesthesia as it is used by the dental profession. Ether, chloroform, Ethyl Chloride, etc., can be disregarded—we don't use them as general routine. True, ether is easier to administer and often called "fool" but more true is the condition of the patient after the anaesthetic. The words "fool" and "proof" are being changed around to some extent, to suit the varied opinions of those who have used it for dental operations. This leaves nitrous oxide plus oxygen and ethylene with oxygen.

Ethylene, C_2H_4 , is, comparatively, a new agent. When mixed with oxygen, the results are mid-way between that of nitrous oxide and oxygen and ether. Ethylene, being an alcoholic derivative, is consequently a fat solvent and retained in the tissues some time after the anaesthetic is discontinued. This retention varies directly as to the degree of saturation or the length of the narcosis. Along with the fact that ethylene is highly combustible, when mixed with certain percentages of oxygen, and its disagreeable odour, it is not as suitable as nitrous oxide and oxygen. This is so to a greater extent in a dental office where Bunsen burners can be so easily left burning and the confined space of our operations rooms becomes obnoxious by the odour.

Any dental surgical operation can be accomplished, using N_2O & O as the anaesthetic agent, if the anaesthetic is properly administered, with the minimum post operative complications. Those who use both general anaesthesia and local or conductive, know that the greater proportion of painful "dry sockets" occur after local or conductive anaesthesia. They also know of cases that the injecting of a needle borders on mal-practice.

Multiple injections required for the removal of a number of teeth, even in ideal clinical circumstances, invariably results in a general reaction to some degree. The removal of many teeth at one time has been warned against, largely because of the local applications of drugs or synthetic drugs in the past.

An operation can be successful only as far as the anaesthetic is a success. The patients requiring general anaesthetics must be in a condition favorable to the surgeon to operate and kept in that condition. This can only be done with a thorough knowledge of the signs of anaesthesia, why these signs are manifested and an apparatus capable of delivering the gases at varied pressures, definite percentage and under instant control.

The most reasonable theory of N_2O & O anaesthesia is that of controlled anoxemia or reducing the oxygen percentage in the body fluids. It has been likened quite adequately to the draft of oxygen supply of a stove. As we know, metabolism depends on oxygen supplied by the blood stream to the different cells of the body. By reducing or controlling this supply in the body fluids, the result is similar to the shutting of the drafts in a furnace or stove.

Normal arterial blood carries about 18.5 per cent. by volume of oxygen. The hemoglobin or oxyhemoglobin as it is called, in this state carries most of this, acting as a reservoir or store room for the serum which supplies the tissues and cells with enough oxygen to function. According to Haldane, the blood serum contains only 0.24% by volume of oxygen.

Air contains 20% oxygen and 80% nitrogen, of this the blood takes up 1.7% by volume nitrogen and as al-

ready stated, only 0.24% oxygen, or seven times as much nitrogen.

C. W. Greene shows that the blood serum dissolves 26% by volume of N_2O . Nearly fifteen times the solubility of nitrogen and 100 times that of oxygen.

Tachiro demonstrates by his experiments that the gray nerve fibres require more oxygen than other tissues to function.

The great solubility of nitrous oxide in the body fluids causes the oxygen molecules to be crowded out or diluted, a slowing up of the chemical changes in the more susceptible brain cells—resulting in sleep.

This gives us control of the narcosis. The percentage of oxygen supplied through our apparatus controlling the plane or depth of anaesthesia. Nitrous oxide like nitrogen is an inert gas, having no particular chemical action on the cells. The molecular activity as denoted by the boiling point, represents the rate at which the gas is eliminated. N_2O boils at $-135^\circ F$. Ethylene about $-137^\circ F$. and ether at plus $98^\circ F$. If Ethylene was not a fat solvent, it would be eliminated at about the same rate as N_2O . Ether, on the other hand, has a high boiling point and also forms unions with the lipoids and takes hours to be discarded. At body temperature, it can be seen how active the molecules of nitrous oxide are.

A common altitude test for aspiring aviators in the Royal Air Force was to have the applicant rebreathe in a bag until the oxygen percentage was reduced in the blood serum, and note the time it took the candidate to become drowsy or partially anaesthetized. Some people are more easily disturbed by the reduction of oxygen than others. That is why a definite technique for all patients results in so many failures.

This combination of circumstances gives an almost ideal anaesthetic. The great solubility of N_2O in body fluids

its unchangeability and its high molecular activity along with the fact that nervous tissues require more oxygen than other tissues to function, makes it possible to anaesthetize a patient with no traceable cell degeneration and the patient to regain consciousness at a minimum space of time with little or no physical embarrassment.

A big factor in the administration of gas oxygen or any anaesthetic is the use of what is called the closed method, rebreathing or the use of carbon dioxide.

With ordinary quiet inspirations, only about 500 c c out of a total lung capacity of 3700 c c is fresh air. This means that over six-sevenths of the air is rebreathed, or as a matter of fact, it never leaves the lung, this forms carbon dioxide.

Oxygen and CO_2 gases are independent of one another, they exist in the same blood corpuscle without reaction. Haemoglobin saturated with oxygen will take up CO_2 as though it held no oxygen in combination. The oxygen seems to be united in the pigment portion, while carbon dioxide with the proteid. While the amount of oxygen does not influence the absorption of CO_2 , yet the presence of CO_2 loosens, as it were, the combination between the oxygen and haemoglobin, allowing the latter to flow more readily to the tissues.

F. H. Scott has shown that the principal respiratory nerves (the pneumogastrics) regulate the rate or rhythm of the respiratory movements, whilst the chemical factor specially regulates the amount of pulmonary ventilation, that is, the depth of the individual respiratory effort. When these nerves are severed, a rise in the alveolar tension of carbon dioxide increases the depth, but not the rate of breathing.

A simple test to show the stimulation of CO_2 is—Fill a bag with oxygen and rebreathe a given number of respirations and hold the breath, the time will be considerably less than if

the same amount of oxygen is inhaled from the bag and exhaled into the surrounding atmosphere, using the same number of respirations.

The cases are identical, except in the first, the amount of carbon dioxide is not reduced, and in the second, it is.

The tendency of CO_2 to liberate oxygen and the fact that the amount of CO_2 has the tendency to control the depth of respiration, throws light on the fact that rebreathing is a distinct benefit to the anaesthetized patient. Especially so, if we can control the volume of rebreathing to suit the individual patient.

All signs or symptoms of anaesthesia are shown by muscular reaction through the reaction of the nervous system.

As it has been stated before—the more highly specialized tissues require more oxygen than other tissues to function, so that when the oxygen has been crowded out or diffused to any degree, we find a reaction through the whole nervous system. This reaction varies directly with the amount of anoxemia present. The controlling element is the amount of oxygen given. When this amount is altered the nervous system reacts at once, as shown by the parts they control. The greater the degrees of anoxemia present, the more pronounced are the reactions. The plane or level of anaesthesia is interpreted through the muscular system in general and the eye.

Color is left out, because with nitrous oxide oxygen as the anaesthetic agent, it plays little or no part in the signs of anaesthesia as long as the other signs are favorable. The placing of color ahead of the real signs of anaesthesia with N_2O & O has resulted in more failures than any other factor.

Cyanosis is due only to the lack of oxygen in the pigment portion of the haemoglobin. All persons have not the same amount or percentage of

haemoglobin. In the anemic patient—low in haemoglobin percentage, there may be enough oxygen present, during the anaesthetic to satisfy the pigmentation of the small amount of haemoglobin, but not enough for the cells to function properly and the patient may be carried to a point of real asphyxia with little or no change of color.

With the plethoric—full-blooded individuals, where the percentage of haemoglobin is high—the degree of anoxemia necessary to anaesthetize the patient does not supply the pigment portion of the haemoglobin with enough oxygen to hold its color—yet there is enough present in the blood to supply all tissue so they function properly.

It is said that a person with 30 per cent. or under haemoglobin cannot be cyanosed—and so cyanosis as an individual sign is ruled out.

The respiration is probably the best guide as to the condition of the patient.

During "light anaesthesia," the breathing is shallow and more or less regular with inspirations prolonged. If the operation is started here or already in progress, groans due to pain stimuli may be exhibited. The general muscular reaction may be seen by movements of muscles, rigidity or voluntary resistance.

As the patient enters the field of "normal anaesthesia," the breathing becomes a little faster, deeper and quite regular. The muscles are relaxed, but do not assume the absolute limpness noticed with ether. The patient has the expression of one asleep.

When the profound stage is reached, the breathing becomes irregular and slower with prolonged expirations. The muscles generally become rigid, twitch and jerk. The expression is wild. The rigidity here must be differentiated from the rigidity in light anaesthesia. These signs become more and more definite until

the "fourth stage" is reached. Here the inter-costal muscles go into a spasm—the respiratory centre of the brain is paralysed and the patient stops breathing. The heart, however, continues to beat for some time after respiration ceases. The nerve supply to the heart muscles are the last to be affected—a very fortunate circumstance. At this point oxygen must be

forced into the lung and the patient brought back to "normal anaesthesia."

The "eye signs" are very important when used along with respiration and other general muscular phenomena. They are, however, not usually dependable until normal anaesthesia is well established.

Operative Dentistry

THOMAS F. HINMAN, D.D.S., ATLANTA, GA.

"A little learning is a dangerous thing;
 Drink deep, or taste not the Pierian spring.
 There, shallow draughts intoxicate the brain,
 And drinking largely sobers us again."

In this day of wild dissension and rather acrid discussion of oral foci, we are sharply reminded of Alexander Pope's epigrammatic way of saying that people are too often prone to accept half truths for the whole thing and it seems to me that the crying need of our profession is to take "larger draughts" in order that we may soberly look at the work in its entirety and not drift away from the old standards which make dentistry pre-eminent in the healing art. Sometimes one feels as if he would like to grasp the whole scheme of things in our professional world and re-mould it more in accord with these standards. For, undoubtedly, amid the wild statements and opinions and discussions with which we find the pages of our dental publications filled upon the advisability of retaining a pulpless tooth, or extracting a pulpless tooth; or, whether oral foci produced disease,

or did not produce disease,—I say amid all this discussion, our minds have been so drawn aside from our real, true work that the subject of operative dentistry lies in the background, and a paper discussing this subject is a rarity.

However, that eminent practitioner, Dr. C. N. Johnson of Chicago has recently written a paper which covers many salient points in practice and draws our attention to some of the older things so fundamental to the successful carrying on of our professional work. The article, which is published in the May issue of *The Journal*, created a mild sensation in dental circles; at least, it did so in our country. I cannot too strongly urge upon the members of our profession to read Dr. Johnson's article carefully and heed the excellent advice of a man so distinguished in the professional world.

It seems to me that amid these varying opinions, both pro and con, the younger mind, that is, the man who has been practising only a few years, must find the profession in such a chaotic condition that it is difficult for him to carry on without many misgivings and I believe his position is a particularly unenviable

one. In my opinion, however, the day of the alarmist is fast fading; the cry of "wolf" has been recognized as a false alarm and the great bugaboo-bear that was going to devour everybody has turned into a Frankenstein which is destroying its creator. So, to the young practitioner, I give this word of advice which I think he may heed with profit. Thousands of people have lived to a pretty good old age who had infected teeth and numbers of these had neither neuritis nor rheumatism, nor any other apparently secondary constitutional disturbance. Let this be remembered and heeded in daily practice.

Dr. Percy Howe, in the June number of "Dental Items of Interest" says:

"When we turn from theoretic-al to practical considerations, we would do well to ask ourselves a few pertinent questions before exposing our minds to those seductive influences which the relating of remarkable cures inevitably carries in its wake, whether the story comes from some mystic shrine, from a Christian Science reading, from a Coue clinic, or the office of a one hundred per cent. extraction enthusiast. Common sense and intuition should not be outcasts here, or anywhere."

It may be interpreted from the foregoing that I am not a believer in oral foci as a producer of constitutional disease. On the contrary, there are some few instances in which this has been demonstrated but the thing has been terribly overdone. In the June, 1926, issue of the "Dental Cosmos" we have a splendid paper by H. J. Coffey in which he has worked out a very satisfactory re-action test which indicates whether or not the individual is susceptible to infection located in the mouth, or whether he is immune. It is well to note that eighty per cent. of all those tested showed immunity.

This man has had opportunity of seeing a tremendous number of cases and his findings are most interesting.

I fear I have used my preamble on a subject I wished rather to avoid. However, it is significant to note that the tidal wave of extraction which has swept the country has about subsided, but it has left unmistakable evidences of destruction in its wake.

For the purpose of covering the subject of operative dentistry in as succinct a manner as possible, I am dividing my discourse into two sections; first, Diagnosis; second, Operative Procedure and Indications for Filling Materials.

DIAGNOSIS

It is interesting to compare the methods of diagnosis used by the Internist with those used by the dentist. The internist fully realizes that the diagnosis is the sum of our knowledge of the disease, whereas the dentist, on examining the mouth, endeavours to find what teeth need fillings, crowns or bridges. He frequently fails to consider the whole mouth as an entity, but simply selects the teeth that apparently need physical repair. This is clearly not as it should be. On the other hand, when the patient presents for examination, careful note should be made of the condition of the tongue, salivary glands and mucous membrane of the whole mouth. Particular attention should be paid to the condition of the gingival tissues, for here we invariably find evidence of sub-gingival disturbances which may simply be a parula, or a slight mucopurulent exudate, or a slight bleeding of these tissues; all evidences of a disturbance that is sure to prove serious.

It is wise when external evidence is present that there are any pulpless teeth, or that the sub-gingival tissues have been invaded deeply, that a complete X-Ray review be

made of the mouth,—always keeping in mind that the X-Ray picture is only one of the factors in diagnosis and should not be used alone as evidence. Those who pin their faith to the X-Ray picture as practically the sole means of mouth diagnosis will most certainly be led astray. Not every darkened area beyond the apex of the tooth is indication of infection. Malocclusion frequently produces this area around the apices of single-rooted teeth,—sometimes around multi-rooted teeth also. No X-Ray picture in the world has ever shown infection but it does show evidence of bone destruction which may, or may not be infected.

And so I say emphatically there must be other evidence than the X-Ray picture to determine the vitality of teeth which are apparently pulpless. And in this connection, let me say this; if we would use our God-given senses, that is, touch, sight and subjective symptoms, we would err less frequently in our diagnoses. It is absurd to begin the construction of crown, inlay or bridge work without first determining if the underlying structures are sufficient to support the restoration, yet daily we see evidence of such errors which result not only in the loss of the patient's money but frequently the loss of the teeth themselves. If more time and attention were given to the proper diagnosis and the application of the right principles in the filling and the correct form of bridging teeth, our work would be of a more permanent character and our patients find greater comfort as a result of our efforts.

OPERATIVE PROCEDURE AND INDICATIONS FOR FILLING MATERIALS

In the selection of filling materials, the keenest judgment on the part of the operator is required. So frequently this part of our work does not receive as careful attention as it deserves. In the first place, no

attempt should be made to make a restoration of any type in the mouth until the oral tissues are put in as healthy condition as possible. The most important thing is the training of the patient in the proper cleansing of the teeth after the dentist has brought them into as nearly normal condition as possible. All deposits should be removed and evidences of gingival disturbance corrected before any attempt is made to restore any of the lost parts.

There can be no fixed set of rules governing the choice of materials to be used in the restoration of the tooth structure. However, there are certain fundamentals which, in my judgment, seem to be paramount.

First, in the anterior portion of the mouth where the filling might be visible, material should be used that appears least conspicuous. It is sometimes permissible to place in these teeth even a filling that,—due to the type of material,—might not be as permanent as another, yet the cosmetic appearance of the teeth, particularly in the mouths of ladies, should receive our utmost consideration. There can be no question but what properly constructed porcelain inlays placed in cavities correctly prepared for their reception have been and are a pre-eminent choice for these teeth. It is quite true that the substitutes for porcelain,—that is silicate cements,—have their place in our choice of filling materials. However, the permanency of this material compared with porcelain is still in a state of extreme uncertainty. It has the serious defect of absorbing the fluids of the mouth and becoming stained by certain foods during the process of mastication. This, however, seems to occur only in some mouths,—which are impossible of pre-determination. When this material has been selected for the filling of any specific cavity, great care should be used in the mouths of young people to prevent its coming

into close proximity with the pulp. It is often wise to line these cavities with a thin layer of cement before the introduction of this material.

This material also lacks permanency in large restorations. This is particularly true where incisal or occlusal surfaces are involved. It is not nearly as compatible with the gingival tissues as is porcelain, and cavities that pass beyond the gum margin filled with this material nearly always show a slight irritation followed by recession, whereas when properly adapted porcelain inlays are used, the liability of irritation and recession is practically nil. At least, this has been my experience.

In the hands of the inexperienced operator, the ability to match correctly the shade of the tooth to be filled is more easily accomplished with the silicate cements than with the porcelain. However, with a little experience, if due care is exercised, porcelain may be adapted and the colour matched with facility. It may be noted that cavities on the proximal surfaces of the incisors should be filled with a material which matches the incisal third of the tooth, whereas, in cavities on the labial and buccal side the filling material should match the gingival third. In fact, in this last locality, the filling material should be slightly darker than the tooth structure. Nothing can be more conspicuous than a labial or buccal cavity filled with a material too light in colour; it immediately becomes noticeable. All pioneer porcelain workers were aware of this when following the line indicated above in matching inlays to the teeth. It may also be noted that as age increases, the teeth progressively become darker.

My observation has been that the apparent ease of manipulation of the silicate cements has caused many operators to become careless and often silicate fillings are so poorly matched that the results are any-

thing but artistic. I cannot too strongly urge the younger operators to use more care and skill in the selection of their colours. In this respect, I have found that women have a much better eye for colour than men and the assistance of the dental nurse in matching shades has been invaluable.

If silicate cement is handled with proper care, it undoubtedly has a permanent place in our work. I believe it is essential to have the slab and spatula for this mixture of even temperature. Some operators have a habit of chilling the slab and not chilling the spatula. This is sure to bring an uneven mixture of the material.

AMALGAM

In my judgment, amalgam has a very limited use in the mouth. Its proper manipulation is the most difficult of all filling material and its stability, even under the most favourable conditions, is extremely uncertain. Proximal cavities, where contact is to be maintained, should rarely if ever be filled with this material. It is indicated on the buccal and occlusal surfaces of molars. After a most careful and thorough series of experiments and observations extending over a period of thirty-six years, my opinion is that amalgam cannot be relied upon either to maintain approximal contact or occlusal carving. It also has a great tendency to protrude at the gingivoproximal margins, thus producing a chronic irritation which is followed by suppuration and destruction of the supporting structures. If conditions make the use of this material imperative, then I believe the fillings should be frequently inspected, smoothed and repaired.

Amalgam has been found valuable for the filling of small cavities in the mouths of patients beyond forty years of age, where the recession of the soft tissues, due to suppurative destruction, has caused these cavi-

ties to be formed on the proximal surfaces at the cemento-enamel junction. Where these cavities are not extensive, not having penetrated to the occlusal surface, small fillings inserted and polished have proved both satisfactory and permanent. It is wise to wipe out the cavity with nitrate of silver solution before the insertion of the amalgam.

I believe it is a much more difficult operation, and requires more time to fill properly two proximal cavities between molars with amalgam,—carve, polish and finish them,—than it would be to insert gold inlays, and, after the work is accomplished, the filling is so far inferior to the properly adjusted gold inlay that amalgam, as a filling material in this locality, is in my judgment, a mistake. Personally, I have made no use of this type of amalgam for many years.

GOLD INLAYS

The introduction of the cast gold inlay has been one of the most marvelous advances in operative dentistry of all time, and we should not be stinted in our praise of Dr. William Taggart of Chicago who first introduced us to this splendid method of filling teeth. It both conserves the energy of the operator and reduces the discomfort of the dental operations to the patient. It is possible, with this method, more nearly to restore the lost parts anatomically than with any method of which I have knowledge.

And yet, on the other hand, we see gross abuses of the inlay. In the hands of the careless operator, it seems to be doing more damage than good, very little attempt being made to carve occlusal surfaces properly, or reproduce the lost structure. It has been my misfortune to see mouths in which the whole occlusion was disarranged due to several teeth being incorrectly inlayed. If occlusal surfaces are left too high, as is frequently seen, traumatic in-

jury is sure to result, and in extreme cases will eventually cause the loss of the tooth.

Some operators have apparently taken this as a rapid method of putting gold in teeth and have lost sight entirely of the fact that correct anatomical restoration is far more important than an absolutely perfect margin. The cement, in the event of an imperfect margin, fills the crevice sufficiently to prevent, for a considerable length of time, re-decay, but an anatomical form is a serious menace to the permanent health of the tooth. In this respect it is frequently noted that the point of proximal contact between molars is, in many instances, located centrally, whereas it should always be located on the buccal center and lingual embrasure so formed as to allow foods, during mastication, to slide over and not irritate nor injure the inter-dental gum crest.

The production of a properly formed cavity to receive a gold inlay, the correct carving and casting, cementing and filling is work which requires the highest degree of artistic skill and extreme care should be exercised at every step. Personally, I have obtained the best results by using what is known as the indirect method into which I will not go in detail. However, there is one point to which I wish to call your particular attention, and that is the tendency on the part of some operators to extreme mutilation of the tooth in preparing the cavity for the gold inlay and the very bad practice of cutting away really sound tooth structure because apparently it can be replaced so easily. Sound tooth structure is the most precious thing in the mouth and this every operator should conserve to the utmost during every carving process.

CEMENTS

The careless manipulation of cements has possibly caused as many

inlay failures as all other sources combined. In the manipulation of this material, cleanliness is of major importance for if the slab or spatula retains any portion of a previous mixture, it must spell defeat. The fluid and powder should be widely separated and no area between the two contain any half-mixed material. Of course mixing should be done rapidly and smoothly and the temperature of the slab and spatula be the same.

I would strongly urge that one brand of cement be adopted by every operator. He then learns the peculiarities of this brand and in so doing results must, of necessity, be more uniform. Personally, my office has used one brand since 1898 and we see no cause for change. I believe the hydraulic cements are always preferable. By "hydraulic" I mean a cement which just as soon as it begins to set, the saliva or moisture should be allowed to come in contact with it to make crystallization perfect.

In setting inlays and crowns, there is sometimes a slight seepage of moisture around the gum margin. This is easily controlled by the application of a ten per cent. solution of trichloroacetic acid,—the excess of this material of course being carefully wiped off before the cement is introduced.

In conclusion, let me say there are many things in operative dentistry not covered in this paper. However, it was not the intention of the discourse to make an exhaustive study of every operative procedure. Rather has its object been to narrow the discussion down to the two very important points of filling material and diagnosis. Its purpose is accomplished if any word has been said which may inspire the operator to a most careful consideration of the filling materials as indicated in each individual case, as well as a close study of every mouth as an entity before any operative processes are established.

SOCIETIES

Alberta Dental Association

Minutes of the meeting of the Board of Directors of the Alberta Dental Association called at the Palliser Hotel, Calgary, on January 10th, 1927, but adjourned to the residence of Dr. A. E. Hennigar on motion of Dr. Mason, seconded by Dr. Coursier.

Those present were: Dr. L. T. Allen, Dr. A. B. Mason, Dr. J. W. Clay, Dr. H. L. Coursier, Dr. Leslie McIntyre, Dr. A. E. Hennigar, and Dr. M. L. Moore.

President Dr. Allen in chair.

Minutes of previous regular and special meetings read and adopted on motion of Dr. Moore and seconded by Dr. Hennigar.

Reports of Committees—Dr. Mason reported progress for the Committee of University re negotiations with Quebec.

Dr. Leslie McIntyre reported that the new certificate forms were now complete and ready for distribution.

Legislative Committee reported several amendments and the following motion resulted:

Moved by Dr. McIntyre, seconded by Dr. Mason that Section 38 of the Alberta Dental Association be deleted and the following section substituted:

Section 38: Nothing in this Act contained shall affect or interfere with the rights or the privileges of physicians and surgeons in the practice of medicine and surgery in this province; but in case a qualified physician and surgeon shall desire to practise dentistry as a profession, he shall first obtain a license from the said Board of Directors by paying the necessary fees and passing an exam-

ination in operative and prosthetic dentistry only. Carried.

Moved by Dr. McIntyre, seconded by Dr. Mason, that the Bill to amend the Dental Association Act as it related to specialists be presented to the Legislature. Carried.

Moved by Dr. McIntyre, seconded by Dr. Moore, that the by-laws as revised and presented by the Legislative Committee be passed and presented for the approval of the Lieut.-Governor-in-Council. Carried.

Moved by Dr. Hennigar, seconded by Dr. Moore, that By-Law No. 9 be amended as follows: that the words, "Three Hundred Dollars", in the line preceding the last one be changed to read, "Five Hundred Dollars". Carried.

Moved by Dr. McIntyre, seconded by Dr. Mason, that a copy of these amendments to the Act and changes in the by-laws be sent to Hon. Geo. Hoadley as soon as possible.

Moved by Dr. Coursier, seconded by Dr. Mason, that Dr. Jas. McPherson, Dr. A. Rooney, Dr. G. J. Roberts, Dr. H. A. Wood and Dr. S. M. Snedden, be the disciplinary committee for the territory north of the Red Deer River for the year 1927. Carried.

Moved by Dr. Clay, seconded by Dr. Hennigar, that Dr. E. M. Doyle, Dr. A. H. MacAuley, Dr. J. M. Nixon, Dr. W. A. Piper and Dr. H. L. Freeland be the disciplinary committee for the territory south of the Red Deer River, and that the Secretary supply the committee with copies of the Act and instructions as to duties. Carried.

Moved by Dr. Mason, seconded by Dr. Hennigar, that on account of the convention of the Dental Society of Western Canada being held in Edmon-

ton on May, 1927, that the Circuit Clinics be deferred for this year. Carried.

Moved by Dr. Moore, seconded by Dr. Clay, that the letter from Dr. Winthrope re routing of clinicians through Manitoba, Saskatchewan and Alberta be filed and that the Secretary write Dr. Winthrope that this question will be fully discussed at the convention to be held in Edmonton in May of this year. Carried.

Moved by Dr. Moore, seconded by Dr. Coursier, that the Secretary be instructed to send \$200.00 to the Secretary-Treasurer of the Dental Society of Western Canada, this being our grant for 1927. Carried.

Moved by Dr. Mason, seconded by Dr. Clay, that the plan for a publicity campaign in connection with Oral Hygiene be left with the next Association meeting when it will be discussed and a decision arrived at. Carried.

Moved by Dr. Clay, seconded by Dr. Moore, that two delegates be appointed to the Canadian Dental Association meeting to be held in Toronto, May, 1927, the appointing of the delegates to be left to the President. Carried.

Moved by Dr. Clay, seconded by Dr. Coursier, that the report of Dr. Allen

re the communications with the Alberta Medical Council be received and that the letter of January 5th, 1927, re anaesthetics be laid on the table for future reference. Carried.

Moved by Dr. Clay, seconded by Dr. Coursier, that the resignation of Dr. Leslie McIntyre as Secretary and from the Legislative Committee be accepted with regret and that this Board go on record as being sincerely appreciative of the splendid work he has done during his term of office. Carried.

Moved by Dr. Hennigar, seconded by Dr. Coursier, that Dr. Mason be made Chairman of the legislative committee with power to appoint his own assistants. Carried.

Moved by Dr. Mason, seconded by Dr. Moore, that Dr. and Mrs. Hennigar be given a hearty vote of thanks and a token of our appreciation for their kindness in turning over their residence for the accommodation of the Board. Carried.

Moved by Dr. Clay, seconded by Dr. Hennigar that Dr. M. L. Moore be appointed Secretary-Treasurer. Carried.

Moved by Dr. Hennigar, seconded by Dr. Coursier, that the meeting adjourn to the call of the President. Carried.

Dental Officers Elected

At a large and enthusiastic meeting held in Shaw's Business College on Danforth Avenue last evening the Toronto East Dental Association was officially inaugurated, the officers elected

being: President, Dr. C. G. Chapin, Vice-President, Dr. J. A. Dieptrich; Secretary, Dr. O. L. Croft; Treasurer, Dr. J. S. Lapp.

Short Reports of Some Things at the Recent Chicago Meeting

FIVE GROWTH PERIODS

"Build strong healthy bodies and sound teeth by good nutrition throughout the growth period," reads the motto on the exhibit prepared under the auspices of the Illinois state department of health by Dr. Grace Wightman, M. D., and Dr. Lydia Roberts, Ph.D. Five growth periods are recognized—prenatal, infancy, pre-school age and the "troublesome teens"—and a section of the exhibit in the lounge corridor is devoted to each.

Accompanying the tempting sample breakfasts, dinners and suppers, set out on the long table by growth periods, are suggestions for parents as to the general habits of the child.

For instance, little Johnny, aged 3 or 4, should have regular meal times and should be taught to eat without dawdling or urging and should cultivate a liking for all wholesome foods. He ought to sleep the clock round—from 7 p.m. to 7 a.m.; take a nap in the daytime and play long hours in the open air.

The hurried lunch, an excess of sweets, the "no breakfast" habit, too much housing over fatigue, and too little sleep are inimical to the child of school age. His meals should follow much the same plan as those of his younger brother, but, of course, must be more generous.

If the children are given plenty of spinach and tomatoes—foods rich in vitamin A—they will be largely insured against tooth decay in later life. Dr. John Albert Marshall, professor dental pathology and bio-chemistry at the University of California, and a recognized authority on the relation of

diet to dental ills, told the practitioners recently.

The lack of vitamin A in the child's diet will not appreciably affect his teeth in early life, he declared but would be the basis for later extensive decay.

PREVENT MOUTH CANCER

Dreaded cancer of the mouth can be prevented to a large extent by careful work and early diagnosis and treatment by the dentist, Dr. C. J. Lyons of the University of Michigan dental school, declared.

"Ill fitting dentures or false teeth roughened and broken down tooth roots, sharp edges of teeth and similar faults often provide irritation which may encourage the development of cancerous growth," he said. "In patients over 35 years of age, dentists should look upon any irritation of the mucous membrane of the mouth with considerable concern, for it may be the source from which cancer will spring."

STERILIZER IS NEW INVENTION

Among the new developments being demonstrated for the first time at this convention is a simple and ingenious sterilizer for the headpiece and bandpiece of the dentist's drill, the first sterilizer for this piece of equipment ever designed. It is the invention of Dr. P. J. L. Nemmers of New York and consists of a bake-lite cover for the drill head and hand piece in the bottom of which a cup, filled with cotton saturated with a 4 per cent. solution of formaldehyde, is screwed. Within ten or fifteen minutes of application the sterilization is complete, according to Dr. Nemmers

The Dental Society of Western Canada

PRELIMINARY ANNOUNCEMENT

Recognizing that no part of human activity has ever amounted to anything unless well organized, and dentistry proving no exception to the rule, the dentists of the Atlantic, Eastern and Pacific portions of Canada have been drawn together by strong mutually helpful Associations. Through natural obstacles the dentists of the Western Prairie Provinces, numbering in all over 600 practitioners, found themselves in unfavorable geographical relationship with the other parts of the Dominion. Long distances had to be covered at considerable expense to obtain dental knowledge. To remedy this condition, through praiseworthy effort and hard work, the Winnipeg Dental Society in 1925 initiated a movement to bring back to life the defunct Western Canada Dental Association, which in two years' time has come to include the solid block of Manitoba, Saskatchewan and Alberta, under a workable constitution, with financial backing from all three Provinces.

It is the privilege of the Edmonton Dental Society to arrange the first programme embracing all three of these Provinces. This convention will

be held in Edmonton, Alberta, on May 25, 26 and 27, 1927. The heads of the committees are hard at work selecting and securing the foremost in demonstrators and clinicians. To put this new and necessary dental organization on its feet, all that we need is a good attendance. As 1927 is an off year for conventions, and the time we have selected is a good one for a motor trip, we feel that we have an exceptionally good opportunity to present our material to you.

We greatly desire to have you lay plans to support your own organization. We suggest that you take this chance of motoring up here, and use your car to see our city and points of interest near by. In this way you can best obtain knowledge of this country which has everything for prosperity, and come into personal contact with our local men of your own profession who are anxious to meet you. Just mark off those dates on your book before you forget, and we will keep you informed as to our progress.

LESLIE MCINTYRE.

Chairman of Publicity.

Volunteer clinicians please forward your names and the subjects you wish to demonstrate.

Bill to Establish a Standard for Specialists in Alberta

No. 11 of 1927

*An Act to amend The Dental
Association Act*

(Assented to . . . , 1927)

His Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Alberta, enacts as follows:

1. This Act may be cited as "*The Dental Association Act Amendment Act, 1927.*"

2. *The Dental Association Act*, being chapter 204 of the Revised Statutes of Alberta, 1922, is amended by adding as section 28, the following:

"28.—(1) No person shall advertise or hold himself out to the public as a specialist or as being specially quali-

fied in any particular branch of dentistry or dental work, without having received from the Registrar of the University of Alberta a certificate of having complied with such conditions precedent as to qualification or fitness as may be prescribed by the Senate of the said University.

"(2) The said conditions may be based either upon the possession of certain diplomas or other professional qualifications, or upon compliance with prescribed tests, by way of examination or otherwise.

"(3) Any breach of this section shall be deemed to be unbecoming and improper conduct, within the meaning of section 31 of this Act."

3. This Act shall come into force...

The Sixth Australian Dental Congress will be held in Melbourne, Victoria, from August 22nd to 27th, 1927, Inclusive

IN THE NEW ANATOMY SCHOOL OF THE UNIVERSITY OF MELBOURNE.

Preparatory arrangements are well in hand, and eminent Australian dentists, as well as distinguished practitioners from abroad, will attend this important gathering. Only recognized authorities in their respective fields, and the foremost exponents of dental technique have been invited to deliver addresses or give clinical demonstrations. This will ensure the highest didactic standards in every department of the Congress. Special Committees have been appointed to attend

to the transport, accommodation, convenience and entertainment of visiting members. The membership fee for ethical dentists in Canada is Ten Dollars, which must be forwarded with the application for membership, to Dr. W. E. Cummer, Royal College of Dental Surgeons, Toronto.

The President of the Congress is W. J. Tuckfield, M.A.C.D., D.S., and the Hon. Treasurer, R. J. B. Yule, D.D.S., the Hon. Sec., Geo. Finlay, L.D.S., B.D.Sc., 101 Collins Street, Melbourne.

Diamond Jubilee, Ontario Dental Association

The Diamond Jubilee Convention will be held at the King Edward Hotel, Toronto, May 16, 17, 18 and 19, 1927. It will be a joint meeting of the Canadian Dental Association and the Ontario Society, and, as the dentists of Ontario will celebrate the sixtieth anniversary of their organization on that occasion an extra large attendance is expected.

The program arranged for this important meeting will appeal to all dentists who are interested in modern dentistry and will include the following well known essayists and clinicians.

Dr. C. N. Johnson, of Chicago, will give a paper on the subject—"What of the Future," and will deal with some of the problems now perplexing the members of the dental profession.

Dr. Russell W. Tench, of New York, the outstanding authority on full den-

tures, will give a paper and clinics on that subject.

Dr. Robert H. Ivy, of Philadelphia, will deal with the problem of making a complete mouth examination in order to insure the removal of all dental infection.

Dr. Abram Hoffman, of Buffalo, will demonstrate appliances which can be made by the family dentist for the purpose of correcting irregularity in the arrangement of the teeth.

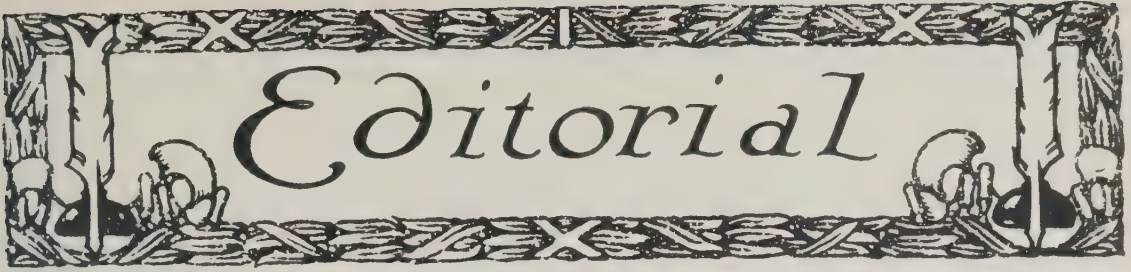
Dr. Harold J. Leonard, of Minneapolis and Milwaukee, will give a paper and clinics on the "Treatment of Pyorrhea." This paper will be discussed by some of our leading Periodontists.

The Hamilton Clinic Club will present a progressive clinic on porcelain.

Other well known dentists will have a part on the programme and their names will be announced later.



Dr. Tench.



Editorial

Editor:

A. E. WEBSTER, M.D., D.D.S., M.D.S., Toronto, Canada.

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ONTARIO—S. Stewart Crouch, D.D.S., Toronto.

Vol. XXXIX

TORONTO, MARCH, 1927

No. 3

What is Research in Dentistry?

Like Cancer, pyorrhea alveolaris is obscure in its origin and almost hopeless in its treatment, in the later stages. These facts stimulate numberless investigators in both fields. Some wish to gain the honor of having solved one of the riddles of life, while others wish to gain the emoluments that might go with the solution of either problem. In a way it makes little difference to the public what it was that stimulated the investigations so long as they gain the benefits. Generally those who go through the regular ethical and professional channels to the public do not so often deceive themselves and the public as to the value of the discoveries they have made because they have had the steadying influence of professional confreres. Those who go through commercial channels to the public with theories of causes or treatment are without this steadying influence and are liable to see the dollars so largely that other factors are obscured. It is rarely that a true investigator is a good business man, and equally rare to see a business man with professional instincts, so if such a person discovers a good thing he puts it in the hands of a commercial organization which sees only the profits in it; this attitude may blind both investigator and commercial house, and consequently deceive the public.

Many medical and dental houses have been deceived so often by plausible schemes, devices, and cures that they become ultra conservative and hold back the wheels of progress by not taking hold and promoting new things. Such houses ask for the production of the names of reliable dentists who will vouch for the correctness of the claims made. This again is hard to get, because the wise ones in dentistry are not so sure of everything that is promoted by either dentists or manufacturers. They have lived long enough to regret.

Dentists are constantly investigating, devising new instruments, new treatments, and new theories to account for dental diseases. In fact as a class they are dreamers and inventors. The records of the patent offices and the stock brokers are evidence of the fact. A recent article by Robin Adair on this subject is well worth the reading. Unfortunately during recent years discoveries of new instruments, methods of treatment or economies in practise are not looked upon as research but the person who will discover the lymphatic system of the enamel can have money from universities and philanthropists, praise from his confreres, and his name inscribed among the scientists of all time, while the man who discovered a far greater boon to humanity--pressure anaesthesia or the rubber denture--goes unnoticed, unhonored and unsung.

In the discovery of the lymphatic system of the enamel there is nothing to sell so the discoverer is exonerated from the taint of commercialism but not of selfishness. Many such persons have starved themselves and lived in squalor to gain the praise of others which they prized more than bodily comforts.

See the numbers of people who have slaved a life-time to find the elixir of life or perpetual motion. Both stimulated by selfish motives, one to avoid death and the other for the comforts financial gain would bring. So let us not look askance at the dentist who sets himself to the task of devising a method of treatment of pyorrhea which will bring him and those dependent upon him a means of livelihood. And, if by chance, he should really discover something which is of great value, let us not act like ostriches as we did in both the Amalgam and the Richmond crown question. Just because an instrument or a process has commercial value surely should not disqualify the inventor of it from scientific distinction as a useless thing might do. The discoveries of Watt, Edison and Bell are good examples of commercial successes of great value to humanity which brought distinction to each. Dentistry has gone stark mad today on biological research as if to make amends for its past neglect of this aspect. University connection has done much to promote this, because even yet they have not become reconciled to the idea of intelligent people of culture working with their hands.

Notes

Dr. W. J. Gies, will be tendered a banquet by the dental profession in New York, Tuesday evening, April 19th, 1927.

The International Association for Dental Research will hold its annual meeting at the Columbia University Club, New York, at 2 p.m., following a luncheon held at the same club at 12.30.

Mr. Addington Bruce has begun to write articles on Dental diseases and their prevention.

Dr. Wallace Seccombe has just returned to Toronto after having delivered lectures in all the principal cities of Western Canada on diet as it affects the human teeth.

In contrast to Dr. Sim Wallace's commendation that milk be not an essential part of a human diet, Dr. Seccombe recommends milk for both children and adults.

The public press is getting into the discussion of the value of the tooth brush.

Dental services in the City of Oshawa, Ontario, are deserving of great praise.

Dr. A. W. Faulkner addressed the Halifax dental society, Tuesday, Feb. 10, 1927.

The following persons were elected as representatives of the graduates in dentistry to the Senate of the University of Toronto: William Cecil Trotter, B.A., D.D.S., Mitchell Albert Ross Thomas, D.D., and Frederick Percival Moore, D.D.S.

Soft food shouldn't be given to children.

Sound teeth are a matter of food and feeding.

The department of health, Alberta, is prepared to send a physician, a dentist and a nurse to any rural district, which will ask for it.

Foods that require audible eating are the best for the teeth.

There is a public notion and often a professional notion that a food to be valuable must have a highly nutritional quality while it is a fact that our forefathers had less digestive disturbances and less nutritional foods than we have. Some brilliant chemist says alfalfa leaves contain iron and many vitamins, hence it is good human food.

The school dentist of St. Catharines, reports as follows:

In Memorial School and St. Andrew's Ward we had 33 children from the Orphans' Home for treatment. It was a surprise and pleasure to find that there was less decay in these 33 scholars than any other 33 in the school, picked at random. Also there was not one of the lot whose teeth had any stain on them. The conclusion I came to was that the matron is very particular regarding the cleaning of the teeth and the food supplied is of the kind to build strong bodies.

The free dental clinic system in vogue in the Stratford public schools for the past number of years is to be discontinued and a semi-annual inspection of all pupils by a dental inspector is to be substituted.

The dentists of St. John, N.B., have been asked by the board of health to carry on the dental clinic without payment because the city council did not make sufficient grant to cover this part of public health service.

Out of 35,000 young adults of New York City only twenty had sound teeth.

Of all the facts published in the daily press at the recent dental meeting in Chicago the suggestion of a new name for dentists got the most widespread publicity. Most of the comments were anything but complimentary. The name "gnathologist" struck the press as a joke and it would be if it were adopted by any considerable number of dentists.

The Ontario Medical Council recently brought action against a well-known osteopath in Toronto for using the title "Doctor." The court did not sustain the Council in their action. It held that there was no deception provided the title doctor indicated what the holder was doctor of e.g. Doctor of Divinity, Doctor of Dentistry, etc.

During recent months there have been several new materials introduced for making artificial dentures.

Dr. Charles Mills, Philadelphia, says if the craze for violent removal goes on it will come to pass that we shall have a gutless, glandless, toothless race, and that we may have, thanks to false psychology and surgery, also a witless race.

Sweets — Desserts — Milk

"After a child is from two to two and one-half years old and has a full set of teeth, he should be given solid, body building foods," Dr. Sim Wallace said recently. "He should have milk during the first two years, of course, for he has no teeth, but God made teeth to chew with and milk alone doesn't build bodies. It supplies the protein but too often is fed to children in over-balancing proportions."

Milk, usually being taken with something else, naturally becomes impacted in the oral cavities and when it sours forms the lactic acid that causes tooth decay.

Dessert, according to the English meaning, should be eaten first instead of last for the sake of the teeth; it

makes no difference to the stomach, he said.

"There is room for misunderstanding here on that statement," he continued. "Here you call any sweet that is eaten last a dessert. In England dessert is only fruit and nuts. Pastries are called 'sweets.' That is why I say dessert should follow the rest of the meal. Grapefruit and oranges that you eat for breakfast should be eaten as the last thing on the breakfast menu. The acid in them saves the teeth. No toothbrush affords enough protection."

Sugary and starchy foods are particularly harmful to the teeth unless followed by the cleansing food, he said. He included potatoes, bread, honey, syrup, jams, marmalade and milk under the two classifications.

CORRESPONDENCE

Associated Life Insurance of Canada

Vancouver, B.C.

Dear Sirs: Jan. 22nd, 1927.

A short time ago an Insurance Agent of The London Life Insurance Co., stated to me that, according to Insurance statistics, the average life period of the male human being is 37 years and the female 42 years. The Biblical average is supposed to be three score and ten. From this we are forced to believe our average is much too low. Many authors state the causes combined with excessive habits to be, over indulgence in eating meat, white bread, potatoes and sugar. These may be indirect causes and greatly lower general immunity, but I wish to draw attention to an experiment carried on by Dr. Hayden of the Deane Institute of Kansas City.

Every patient entering his office complaining of any internal trouble is asked to allow him to X-Ray his or her teeth. The abscessed teeth are extracted on his advice, and the apex of the root, or the abscessed area, is clipped off and then put into a solution called Agar-agar Culture and left there a definite period. After this definite time has elapsed, the culture is injected into a rabbit, then after a certain lapses of time and observation, it is noted that the rabbit exhibits the very same symptoms of which the patient complained from whom the tooth was extracted. The rabbit is then dissected and an exact diagnosis made. From this procedure on about 2000 cases, Dr. Hayden is reported to have decided that many ailments of the human system have their origin from abscessed teeth.

It seems from the above that once a pulp (nerve) is exposed that it is almost imperative to have the tooth extracted. To prevent this, it is almost

imperative that everybody should have their teeth examined once every six months and all small cavities filled before the pulp is exposed, because putrescence and abscesses very frequently follow exposure of the pulp.

From a special case which lately came under my observation, each and every person should have a general examination by a *competent* physician once every year, at least. The case I refer to is that of a young married lady. Just five months after her marriage her husband died with T. B. and at eleven months her boy arrived.

To prevent the above too frequent occurrence, I believe the Life Insurance Company should present to parents a policy for boys and girls ten years and over, and specify not only dental examinations every six months, but general examinations at least once a year by Insurance physicians, special rates being offered if carried out. The savings in Dentists' bills alone will more than pay the physicians' fees if regular examinations are obtained, also many hospital charges. A stitch in time is better than nine later. To the Insurance Companies it will result in many persons paying their full quota of premiums in place of the Company paying the policy after say, three to ten premiums are paid. The death average will be raised nearer to the Biblical standard. Then eventually premiums can be much reduced on the policies.

At the time the Notice of Premiums Due are sent out to policy holders, the above letter could be sent along as an enclosure for the good of parents as well as children, with special notice at the bottom of it advising that under no circumstances should a stiff tooth brush be used, preferably a very fine

soft white-bristled brush to prevent laceration of the gums, which laceration is, in my opinion, one cause (indirectly) of so much pyorrhoea.

At time of the examinations of the policy holders, small printed slips could be handed to the boy or girl advising regarding proper diet, over-eating, a sensible amount of exercise daily, proper care after heavy exercise, proper sleeping, another regarding the

results of cigarette smoking and the damning effects of alcoholic beverages, also moral habits.

One printed slip should be handed out for each of the above, and the physician directed to draw attention to each according as he sees they are wrongly indulged in.

Yours sincerely,

Walter M. Gallagher, D.M.D.

808 Birks Bldg.

Canadian Dental Research Foundation

A meeting of the Executive was held February 18th, 5.30 p.m. at 83 Bloor St. W., Dr. McLean presiding.

There were present: Drs. Box, Mason, Clark, Husband, Professors Anderson and Grant.

The Minutes of last meeting were read and approved.

The Secretary read a Financial statement as follows:

FINANCIAL STATEMENT TRUST ACCOUNT.

No Receipts since last meeting.

Amount paid up\$13,838.05

CURRENT ACCOUNT

Balance at last meeting, \$550.57..\$ 550.57

Receipts:

Refund from Ontario

Press\$142.50

National Trust Company 198.98

From Sale of Bulletins.. 119.00

460.48

\$1011.05

Expenditures since last meeting:

National Trust Account..\$17.41

Auditors Account 50.00

Cash for Postage 10.00

Stenographic assistance . 10.00

C. D. H. C. towards Rent. 50.00

Bank exchange32

Balance on hand, eb. 18, 1927.... \$873.32

137.73

Accounts payable:

Ontario Press\$17.41

Stenographic Assistance 10.00

It was moved by Mason, seconded by Clark, that the Report be adopted and the accounts be ordered paid. CARRIED.

Carrying out instructions of Executive at last meeting, the National Trust Company have invested trust funds on hand, by purchasing a \$400 Dominion of Canada Bond, 4½ % due

September 1st, 1940, at \$96.10, for \$388.59. A letter was received from National Trust Company, asking if payments might be made quarterly in future. This was approved.

Secretary read copy of letter sent to Dr. Cowan, requesting information as to balance of grant from Dominion Dental Council. No reply has been received from Dr. Cowan, to this letter. As Dr. Seccombe had written requesting that the share of this grant be allotted to the Dental Faculty, Toronto University, be forwarded to them, it was moved by Clark, seconded by Mason that \$300.00 being the amount received from the Dominion Dental Council for the purpose, be forwarded to the Dental Faculty, Toronto University, and that they send Reports of any Research work carried on. CARRIED.

Directors meeting in Halifax. No Report has been received from Dr. G. K. Thomson, as to whether this meeting was held or not.

The question of grants was next considered.

Ontario Dental Association— Dr. Clark stated this Association had not yet reached any decision on this matter. It was intimated that if the Board of the R. C. D. S. were to make a grant, they might give a similar sum.

The Secretary was instructed to make formal application to each of

9 Modern Requirements of the Dental Profession Met in a Dentifrice

- 1 Teeth whiter: for it removes the dingy film successfully — the film which the profession holds largely responsible for decay and pyorrhea.
- 2 Polishing agent: softer than the enamel and remarkably efficient in giving high polish and lustre.
- 3 Salivary flow: markedly increased by the mild acidity of the paste, hence better tooth protection.
- 4 Mildly acid: yet many tests show it harmless to enamel.
- 5 High polish: gives wonderful lustre and polish, so plaques less readily adhere.
- 6 Firms the gums: and, in addition, gives them a finer tonal quality.
- 7 Mucin plaques: curdles and disintegrates them at all stages of their formation.
- 8 Ptyalin index: decidedly increased to combat starch deposits better.
- 9 Alkaline index: decidedly increased, thus better combating causes of tooth decay.

May we send you a full-size tube to try, together with recent date and literature? Just mail the coupon.

MADE IN CANADA

THE PEPSODENT COMPANY
Dept. V-73, 191 George St., Toronto,
2, Ont., Canada.

Please send me, free of charge, one regular 50-cent size tube of Pepsodent, with literature and formula.

Name

Address

Enclose card or letterhead

2366

In Canada of the 361,605 draftees under the Military Service Act, 181,229 or almost one-half of them, were found to be physically unfit for full service in the field.

The need for Health Reform through education was thus demonstrated to be as necessary as in Europe where the League of Red Cross Societies made the assertion "that a great part of the world-wide prevalence of disease and suffering is due to wide spread ignorance and lack of application of well established facts and methods capable either of largely restricting it or preventing it altogether."

Due largely to the education carried on since the war by the Red Cross and other health agencies in Canada, many

thousands of our school children have been medically and dentally examined in the past few years. Through such examinations it has been clearly demonstrated that a very high percentage of Canadian children have defective teeth, that there is an almost constant ratio of one case of malnutrition in every three children and a far too high proportion of children with nasal obstructions or eye defects.

With this and much other evidence to back the now strongly held belief that many of the diseases of adult life arise in early childhood and that prevention must therefore begin during these years, the Red Cross began its health education programme with the children of Canada.

DENTAL PRACTICE FOR SALE—City of Hamilton, suburban. Box 41, Dominion Dental Journal, 73 Richmond W., Toronto 2.

DENTAL NURSE—1920 graduate, has had several years' experience before graduation, and is capable of doing Prosthetic work. Can give letter of recommendation. Apply Box 43, Dominion Dental Journal, 73 Richmond W., Toronto.

FOR SALE—A Dental Practice in small Saskatchewan town; good crop district; no opposition; low overhead; gross cash earnings last year, \$4,500, with prospects better. Must sell by 1st of March. Apply Box 44, Dominion Dental Journal, 73 Richmond W., Toronto.

DENTAL OFFICE FOR SALE—In Edmonton, Alta. Excellent location, with two Medical Doctors. Apply Edmonton Journal, Box 647.

DENTAL OFFICE FOR SALE, TORONTO—Practically new equipment consisting of Ritter Chair, Webler Unit & Ritter Engine, Ritter X-Ray, Gas. Low Rent and fairly well located. Apply Box 45 Dominion Dental Journal, 73 Richmond W., Toronto.

SPECIAL THIS MONTH—New Burs H. P. No. 7—ROUND—INV. CONE—WHEEL—Size 3/0, 20c per dozen. Highest prices paid for scraps, etc. WE RECUT your used burs extra sharp at 25c per dozen. Sheun Co., 602 Oakwood Blvd., Chicago, Ill. Established 1906.

DENTAL OFFICE FOR SALE, Bloor West, Toronto; or would sell equipment separately cheap. Clark chair and unit Ritter engine used five years. Owner leaving due to ill-health. Apply Box 46, Dominion Dental Journal, 73 Richmond West, Toronto.

DENTAL OFFICE FOR SALE—At City limits, Toronto, in rapidly developing section. S.S.W. Unit and engine, Ash Chair. Four year lease at \$25 per month. A good location for some one. Apply to Box 47, Dominion Dental Journal, 73 Richmond W., Toronto.

FOR SALE—Dental Practice in live New Brunswick town; very desirable office; central; up to date equipment; \$700.00 will handle; owner has other interests; for particulars, write "Dentist" c/o Dominion Dental Journal.

Dominion Dental Journal

Vol. XXXIX

TORONTO, APRIL, 1927

No. 4



W. C. TROTTER, B.A., D.D.S.

President of the Canadian Oral Prophylactic Association, Chairman of the Canadian Oral Hygiene Council, Recently Elected a Member of the Senate of the University of Toronto.

ORIGINAL COMMUNICATIONS

Anaesthesia General, Nitrous Oxide

GORDON L. FRAWLEY, D.D.S., TORONTO.

Anaesthesia depends on the ability of an agent to reduce certain brain functions. Using N_2O , this is accomplished by crowding out the oxygen in the body fluids and so lowering, as it were, the metabolic rate. The difference between the oxygen required for metabolism of the nervous tissues and that quantity required by other tissues represents the plane of normal anaesthesia and varies with the individual patient. For instance—the growing child has a relatively large blood volume and a high rate of general metabolism. This condition leaves a smaller “margin” between the metabolism of the nervous tissues and that of others requiring a more accurate mixture of N_2O and O than adults. In the aged, the general metabolic rate is low and the margin broader.

Having an apparatus capable of delivering the gases at various pressures and definite percentages, the next requirement is a thorough knowledge of the signs of anaesthesia or to be able to interpret the degree of anoxemia present by the reaction of the patient.

During the induction period or light stage of anaesthesia—the muscles in general may be held rigid or move voluntarily. The breathing is usually slow and shallow with prolonged inspirations. The eyelid resists opening—the pupil reacts to light—the conjunctiva sensitive to touch and brushing the eyelash causes a reflex wink.

The normal stage will be recognized by a general relaxation of the muscles,

but not to the same degree of limpness as with ether or chloroform. The breathing is faster, somewhat deeper and quite regular. The eyeball is fixed or rolls slightly—is not sensitive to touch. The pupil is slightly dilated or contracted and does not react to light.

In the profound or deep stage, the muscles become involuntarily rigid and jerk spasmodically. This must be distinguished from the rigidity of light anaesthesia. The breathing is irregular and sobby with the expirations longer than the inspirations. The eyelids are open, the eyeball fixed and the pupil widely dilated. The eye, of course, is not sensitive to touch and the pupil does not react to light. The deeper the stage becomes, the wider the pupil dilates and the more restricted the breathing is, until only a small ring of iris is seen and respiration stops. Pure oxygen is now required to resuscitate the patient.

The induction should be started with 100% N_2O and oxygen added only when indicated by the patient's condition. This shortens the period of excitement and the patient experiences less mental disturbance or dreaming and is consequently easier to control during the excitement stage. The feeling of suffocation is not brought about by reducing the oxygen in the blood stream, but from an over accumulation of carbon dioxide during the period of semi-consciousness. To overcome this, the rebreathing valve is left well open, allowing the exhalations of carbon dioxide to escape into the surrounding atmosphere.

The induction is continued with 100% N₂O until a change in the character of the respiration is noticed, that is, the breathing becomes deeper and somewhat faster. This change is the first sign of oxygen being required, so from 5% to 7% oxygen is added. The patient is given 5 or 6 inhalations of this mixture and their reaction carefully watched. Most people require from 5% to 10% oxygen, but occasionally it runs to 20%. The mixture is adjusted to keep the patient in the plane of normal anaesthesia from here on, until the operation is terminated.

A dental surgeon is not called upon to make a physical examination of all patients presenting themselves for extraction. There are, however, some points that a dental anaesthetist should observe. Pallor may indicate anaemia, or faulty heart action or blueness of the skin may indicate serious heart disease or pulmonary disturbances. A florid complexion may mean high blood pressure.

Observing the pulse often guides to physical disorder. A feeble, rapid pulse may indicate poor heart action. A short, sharp pulse, aortic regurgitation. The occasional drop of a beat may indicate ventricular fatigue.

Prominent blood vessels around the temporal region and a radial artery that is hard to compress or rolls about under the finger may indicate hardening of the arteries and the systolic blood pressure should be taken.

The respiration should also be noted. Difficulty in breathing is sometimes due to heart failure. A patient not able to hold the breath more than twenty seconds should be examined for heart trouble.

Although these conditions are not contra-indications for gas-oxygen, they do help in determining pre-medication. If the blood pressure is unduly high, or the heart condition extreme, the family physician is consulted. Under the influence of gas-oxygen, the rise in blood pressure is not greater than it is during a severe coughing

spell. The heart action is usually stimulated. However, one cannot be too careful where human life is involved.

In cases of high blood pressure 1/100 gr. of nitro-glycerine in tablet form, dissolved on the tongue, usually reduces the pressure. In cardiac disease, the heart can be stimulated by administering 10 drops of tincture of digitalis in a little water, or 1/60 gr. strychnine sulphate hypodermically.

Premedication is sometimes indicated in the extreme excitable, athletic and stimulated types. The action of drugs for these types seems to lower the general metabolism and so widen the anaesthetic margin. Without drugs a more concentrated mixture of N₂O is required. With premedication, a higher percentage of oxygen may be used. The aim is to anticipate the troublesome types and administer drugs to bring the patient to normal susceptibility.

Some of the accepted drugs used are:

Morphine ($\frac{1}{8}$ gr. to $\frac{1}{4}$ gr.) and hyascine (1/300 gr. to 1/100 gr.), administered hypodermically, one-half to an hour before the anaesthetic.

Chlorotone—10 gr. to 25 gr. administered in 5 gr. doses at one-half to one hour intervals. This is a safe and harmless hypnotic and may be used when a narcotic is undesirable.

Vernol, 5 gr. to 10 gr., by mouth fifteen minutes before the anaesthetic, gives sufficient time for its action.

The anaesthetist should at all times be calm and self-reliant. Gaining the patient's confidence before the anaesthetic is started by kind, assuring treatment, often accomplishes more than medication. While extreme cases are not to be treated lightly, nevertheless, patients should not be unduly frightened.

The patient is instructed to come without the preceding meal; unless pre-operative treatment is indicated, no other instructions are required. On

arrival, all clothing around the neck and chest that tend to restrict breathing should be loosened. The position in the dental chair should be upright. The head rest should be adjusted so that the breathing is not embarrassed. With a few reassuring words as to the safety and painlessness of the operation, the anaesthetist is started.

When the narcosis is well established, the mouth is packed with gauze or cotton covered with gauze. This tends to control mouth breathing, absorb blood and stop teeth or tooth structure from entering the trachea. However, it should not be pushed back far enough on the soft palate to obstruct nasal breathing.

Retching and vomiting by a patient whose stomach contains little or no

food is usually a manifestation of anoxemia similar to "mountain sickness." One or more breaths of pure oxygen will as a rule control the retching before vomiting occurs. In case the patient does vomit during the anaesthetic, the head should be pushed forward and down, allowing the stomach to empty. The mask is kept in position and pure oxygen administered to re-establish the cough reflex so that any food particles entering the trachea are coughed up. This applies to any foreign substance such as a root, tooth, mouth prop or swabs that are "lost."

On the completion of the operation, two or three inhalations of oxygen hastens the recovery.

The Treatment of the Maxillary Sinus

FULTON RISDON, M.B., D.D.S., F.A.C.S.

With special reference to infection from the alveolar process, and Surgical cleanliness relating to such operations.

The infections of the Maxillary Sinus are divided under the headings of acute, subacute and chronic infections. The acute infections give well-defined symptoms, while the chronic conditions are often classified under the broad heading of "Catarrh," but they do not resemble catarrh except that there is a dropping in the throat.

For the present let us consider the acute symptoms as the patient presents with some disturbance in the upper jaw which he frequently refers to as a pain radiating to the forehead on that side and is mistaken sometimes for frontal sinus disease. This confusion should seldom occur, as the pain in the frontal sinusitis occurs with striking regularity before noon,—known as the eleven o'clock pain,—and disappears by two, to recur again. The frontal pain due to the acute antrum is more continuous, more marked when the head is lowered and is much more persistent in character but of a lower grade. These two pains resemble each other in this way, that if a little discharge escapes, for the time being the pain ceases, and is more likely to occur with the frontal sinus than in the antral infection.

If one is thinking of infection from the teeth, the patient would come complaining of a sense of fullness in that cheek, and if the sense of fullness becomes pain it radiates to the forehead, sense of depression exists, and if there is any escape of discharge it is likely thick, of a yellow color and of a pungent odor.

The examination of the patient, first intra-orally, may show signs of healed sinuses, the mucous membrane above the apical area may be injected, the

teeth on that side may be sore to pressure, the sense of discomfort increased by tapping on the teeth. The intranasal examination may or may not show traces of pus within the nose, especially in the middle meatus area. Also the mucous membrane in the region of the ostium maxillare (which is not directly visible) is injected. In the subacute conditions, the anterior end of the middle turbinate may be hypertrophied and is a sign of continued irritation, likely due to the pus flowing over it from the antral ostium.

The operator having in mind the above conditions, should, we believe, further investigate this condition by first reviewing with the patient the likelihood of teeth in the upper jaw on that side giving rise to this infection. By that we mean, what teeth have been devitalized, but more especially what teeth have given pain and discomfort after devitalization.

Dental X-Rays should be taken, and if still in doubt, another series should be taken at a slightly different angle; and if doubt yet exists, would suggest stereoscopic X-Rays in the postero-anterior and lateral positions. We would urge that every operator read his own X-Rays, as he is directly responsible to the patient, and has an interest that a technician cannot possibly possess.

So much for attempts to ascertain whether roots project through the floor of the antrum; but we would suggest that frequently the roots causing this condition do not project into the antrum but have caused an osteomyelitis which shows above the apex and below the floor of the antrum as a change in the detail of the bone. We have found at operation that through these areas of changed bone above the apical area, a probe could

be passed with ease through the softened bone into the antrum of Highmore; and we mention this so that one may be further on guard.

The tendency to-day in the rhinologist's consulting room is to overlook the likelihood of infections from the alveolar process, and you frequently hear men of experience say that necrosis of bone in and about the antrum seldom occurs. With this one would agree if they are speaking of the walls of the sinus other than the alveolar process, as here necrosis of the floor of the sinus is quite to be expected, and should always be looked for.

The further examination consists of placing a pledget of 10% cocainized cotton on an applicator under the in-

ferior meatus for five minutes, and then with a trochar puncturing and irrigating the sinus, collecting the irrigation and in some cases allowing it to settle. This gives immediate relief and is curative provided the infection is not of dental origin, as the source of the infection must be removed, and sometimes that means removal of the necrotic bone as well as the tooth.

In our next article we will outline the more or less accepted treatment for openings which exist through the floor of the alveolar process in the subacute antrum.

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Research on Metallic Cooking Utensils at Mellon Institute

Dr. Edward R. Weidlein, director, Mellon Institute of Industrial Research, University of Pittsburgh, has announced the appointment of Dr. Erich W. Schwartz to the senior incumbency of the Institute's Multiple Industrial Fellowship on Cooking Utensils.

This Fellowship has been recently established for the purpose of making a comprehensive chemical and pharmacodynamic study of the effects of the corrosion of metallic cooking utensils during the preparation of foods therein.

Dr. Schwartz, who is a specialist in food research involving chemistry, physiology, and pharmacology, received his professional training at the University of Illinois (A.B., 1912) and at the University of Chicago (M.D., 1914). During the period of 1916-1926 he was associate pharmacologist, in charge of pharmacological investigations, in the Bureau of Chemistry, Department of Agriculture, Washington, D.C., but he spent one year (1923-1924) at the University College, London, England, as a fellow in medicine of the National Research Council.

Sudden Swelling Following Injection of Novocaine

REPORT OF CASE BY MR. BRYCE

March 22nd, 1927.

Patient was having trouble with his teeth and came to the College for treatment. Dr. Hoskins' diagnosis indicated the removal of the upper left second molar and the lower right second molar. Patient was then sent in to the immediate treatment department.

A mandibular injection was made, supplemented by a long buccal; these did not show any abnormal symptoms. While waiting for anaesthesia an infiltration injection was made at the buccal fold in the region of the upper left second molar, and in the interval of re-filling the syringe (an elapse of not more than thirty seconds) extreme swelling of the cheek took place. The swelling was the size of half of a medium sized orange and extremely localized, leaving the cheek at a sharp angle, the entire circumference. The patient felt no pain, so after waiting two or three minutes a few drops of the anaesthetic were injected into the lingual tissues. The effect of this proved to be quite normal. On Dr. Gardiner's advice, both teeth were extracted, the upper one first. Both

extractions were normal, very little hemorrhage occurred. By this time the swelling appeared to have spread over a slightly larger area. Dr. Webster was asked to look at the patient and he gave a violet ray treatment which reduced the swelling a little. Patient was then sent home. The following day he had fairly severe pain in the upper molar region on left side. Had difficulty in opening his mouth and ate very lightly. That evening Dr. Gardiner called and found that swelling had reduced considerably. Dr. Gardiner syringed patient's mouth with a hot saline solution. He also discovered a bruise inside the cheek which was likely caused by the joint of the forceps. The same evening patient vomitted quite a lot and had marked headache pain when he moved. Patient came into the College next day. Swelling had gone down still further. Pain was not nearly so marked. A slight bruise was noticed on the outside of the cheek. Dr. Webster advised hot saline mouth wash and a light diet for a few days. Two days later patient was telephoned and condition had practically returned to normal.

A Report of the January Meeting of the National Association of Dental Colleges

W. E. WILLMOTT, D.D.S.

A word on the history of the Association

In 1884 the National Association of Dental Faculties was organized in New York, eleven of the Dental Schools of the United States being represented. The Royal College of Dental Surgeons was admitted to membership in 1889. The object of this organization was "to promote the interests of Dental Education".

During the World's Fair in Chicago in 1893 a meeting of members of Dental Faculties was called for the purpose of forming an organization to discuss *what* should be taught under the new subject of "Dental Technics". The late Dean Willmott was present as was also one of our graduates, Dr. A. Rose, then of Peterboro. The latter, though not a member of the Faculty thought that possibly the call for the meeting might not reach any of our Faculty and did not wish our School to appear indifferent to such a desirable object. Ten other schools were represented.

By 1909 a number of Universities had formed a Dental Faculty or had absorbed an active School. These had in some respects set a higher standard than the National Association of Dental Faculties demanded and so organized the Faculties Association of American Universities.

There was also the Canadian Faculties' Association.

The present high standard of curriculum and of teaching in Dental Colleges is almost wholly due to the progressive efforts of these bodies, particularly the first two; the former of which at first dealt only with *what*

and later with *how* to teach, while the latter was altogether administrative in character, dealing with preliminary requirements, length of session, number of sessions, subjects of the curriculum and their arrangement in the different years of the course.

In 1923 these four valuable organizations were induced to commit suicide that the American Association of Dental Schools might be born. It was the fourth annual meeting of this body held in Chicago.

The meeting began on the morning of January 25th, under the presidency of Dr. H. E. Friesell of Pittsburg, with a larger number in attendance than at any former meeting of this Association or of any of the former Associations.

Several standing committees presented interesting reports; — just a note from three of them.

The Tabulation Committee: In 1923 2,610 graduates were examined by State Boards, of whom 10.1 per cent. failed. In the past 17 years, 41,949 graduates have been examined by State Boards with a failure of 13.9 per cent. The report by States showed that in New Jersey the largest number failed being 47 per cent. of those examined.

Without mentioning names before this body it is interesting to note that the graduates of one college were examined in 7 States, and all were successful in passing, while those from another college were examined in 10 States and only 1.9 per cent. failed, and from another college in 2 States 26 per cent. failed. (Canadian figures are not included).

Dental Index Bureau:—This is a

commission originally appointed by the Institute of Dental Teachers at St. Louis in 1908 when I had the honor of being President. The Bureau has undertaken to index all the Dental Literature since 1839. This is now complete except for the period 1896-1910 and it is expected this will be finished in two years. The whole undertaking has necessitated the writing of over 600,000 index cards, and has already cost over \$40,000.000.

Commission of Dental Nomenclature—This commission has been at work over twenty years. The aim is to simplify and standardize Dental terms. Considerable progress has been made and the early publication of a Dental Dictionary is in view.

The question of the Predental year or years frequently came to the fore. The term, predental, was criticized, but nothing better was suggested. It seemed to be the general consensus of opinion that the Dental School should control the curriculum of these so called predental years, so that the course might have a definite trend towards the subjects of later years. Especially should the scientific subjects of Physics, Chemistry and Bio-Chemistry, as the foundation for future subjects be given the Dental slant.

One well known Dean argued that the student who intended to specialize in practice should not be required to "jump so many hurdles". Why should one who intended to devote his entire time in practice to Periclasia, for example, be required to spend hours and hours in the Prosthetic laboratory? Why not spend that time in preparing for his specialty? The suggestion did not meet with any support.

To my mind the most important paper was one dealing with Children's Dentistry. It was a strong arraignment of Dental Schools for their negligence in not properly teaching the subject and of the members of the profession for their attitude towards the deciduous teeth. The writer claimed

that many of the large number of deaths from heart lesions were due to the apathy of the Dental Profession in regard to the proper treatment of children's mouths. How much does the average graduate know of the Histology of the deciduous pulp, of the anatomy of the deciduous teeth, of the roots of the deciduous teeth, of space retainers where there has been premature loss, of the danger of black copper cement in deciduous teeth? What is taught of cavity preparation in deciduous teeth, what of root therapy? Infection from deciduous teeth is just as dangerous as from permanent. There is very little in Dental literature on the subject. Every Dental School should have a special clinic for children and each student should be required to do a certain amount of each type of work for children. The subjects of the curriculum should be readjusted to make this dominant with the other subjects grouped about it. Why so much neglect on the part of the Practitioner? Because the graduate does not know how to operate on deciduous teeth; he does not know how to handle children, and is not willing to take the necessary time.

In our Infirmary we are following the essayist's suggestion and have a children's clinic every morning and the students are obtaining more instruction now than ever before in this type of practice.

I would like to criticize many of those who were assigned to discuss the different papers. In nearly every case the discussor repeated the substance of the original paper and took up more time than did the original writer. A notable exception to this was the case of our Dean whose discussion of a paper on "The need for a job analysis", was brief and to the point and did not repeat the original paper.

From the discussions at various times throughout the meeting, regarding the Infirmary, I am convinced that we in this Faculty have nothing to be

ashamed of in equipment, teaching or management, except possibly the number of students for each clinician on the floor.

You will be interested to know that four Deans present were graduates of the R. C. D. S.:—Dr. A. W. Thornton (1890) of Montreal; Dr. A. H. Hipple (1894) of Omaha; Dr. R. D. Thornton (1912) of Richmond; and Dr. W. Seccombe (1900) of Toronto. I doubt if there is another Dental College, with the possible exception of the Chicago College, which has provided as many Deans as has the R. C. D. S.

The whole meeting was a serious gathering. The only real laugh was at some remark of Dr. Hipple, and consequently one was somewhat exhausted after seven hours a day of faithful attendance without any respite.

Dr. Cowling's paper on "Applied Chemistry, Physics and Metallurgy", has already been mentioned by Dr. Ross, so I need not refer further to it.

It is unfortunate that many of those attending gatherings of this nature do not appreciate the advantage of beginning the sessions on scheduled time instead of being half an hour late. "Punctuality was certainly the thief of time".

I was pleased to meet again so many of the older men who belonged to two of the former organizations, previously mentioned, and also to see such a large number of the younger members of the various Faculties. No one can possibly attend gatherings of this nature without coming back to their work greatly inspired to more earnest endeavor to give their students the best instruction possible.

Interesting Legal Case in Alberta

REPORTED BY A. BLAIR PATERSON, SOLICITOR FOR THE ALBERTA DENTAL ASSOCIATION.

A peculiar case of unbecoming and improper professional conduct on the part of a dental practitioner in the Province of Alberta, has been successfully combatted. The unbecoming and improper conduct consisted of a registered practitioner countenancing, assisting, co-operating or collaborating with an unregistered person to defeat the provisions of the Alberta Dental Association Act. A little history is necessary to furnish the background for a proper understanding of this particular case.

A dental mechanic carrying on business in the city of Edmonton, realizing the benefit to be derived from conducting a dental practice without the expense attendant in qualifying as a dental surgeon or the overhead which necessarily follows the establishment of an office, proceeded to take impressions and prepare plates without the assistance of a qualified practitioner. The Alberta Association secured the necessary evidence, and on three occasions the dental mechanic was successfully prosecuted, convictions being obtained in each instance, which resulted in a fine of \$50.00 and costs for the first offence and \$400.00 and costs in the two subsequent convictions. With the exception of the first conviction, the accused appealed from the decision of the Police Magistrate to the Appellate Division of the Supreme Court of Alberta, which Court, after reviewing the evidence, sustained the convictions recorded by the Police Magistrate.

The dental mechanic next endeavored to obtain an amendment to the Alberta Dental Association Act, providing for the taking of impressions by dental mechanics, but his efforts were frustrated by the Provincial Government, which has had a very high

standard for professions in the Province of Alberta.

With the refusal of the Alberta Legislature to countenance the lowering of professional status in Alberta, it was necessary for the mechanic to adopt some other means of securing immunity from further prosecution if he desired to continue the illegal practice of dentistry. A registered practitioner—one F. L. Buggins—was induced to practice his profession in the house occupied by the mechanic and which was also used by him as his dental laboratory.

The Alberta Dental Association, through its solicitors, notified the practitioner shortly after his commencement to practice with the dental mechanic, that his procedure was objectionable to the Association, but no change was evident as a result of this notification.

A lapse of time was necessary before the Association was justified in proceeding against the practitioner under the provisions of the Alberta Act for unbecoming conduct, with the result that the practitioner continued to collaborate with the dental mechanic for a period of almost seventeen months from some time in October, 1925, until the proceedings were commenced in February of this year.

So far as this Association is aware, there is no record of any previous case which was on all fours with the particular case in this Province. The procedure under the Alberta Act requires a preliminary hearing by a Discipline Committee, and if the Committee finds the charge preferred against the licenseholder to have been proved, it directs that the whole facts be submitted to a Judge of the District Court of the District in which the accused licensee is residing, and upon

such reference the District Court Judge has power to hear and determine all charges, and to summon witnesses, and if the licensee be found guilty of the charge made against him, the Judge may order the forfeiture of his license or may suspend the same for any period that to him may seem meet.

The Discipline Committee of the Alberta Dental Association Board held a sittings on the 23rd day of February, A.D., 1927, after notice to the practitioner, who was present at the preliminary hearing. The solicitor for the Alberta Dental Association placed the following facts before the Committee:—

That the practitioner, F. L. Buggins, practised his profession at 10946—98th Street in the City of Edmonton in the Province of Alberta;

The Abstract of Title, (certified to by the Registrar of the North Alberta Land Registration District) showed that the Title to the premises—10946 98th Street, otherwise legally described as Lot 11, Block 20, River Lot 10, Plan A5, Edmonton—stood in the name of "William Lees of the City of Edmonton in the Province of Alberta, dental mechanic."

A Certificate by the City Assessor of the City of Edmonton to the effect that F. L. Buggins' name did not appear on the business tax assessment roll in respect of the practice of his profession in the City of Edmonton; but that the business assessment with respect to the premises at 10946-98th Street was in the name of William Lees, and that the premises were assessed as a dental laboratory.

That F. L. Buggins did not subscribe for telephone service, nor was his name listed in the latest telephone directory as a dentist, but that the telephone at 10946-98th Street was contracted for and billed to William Lees, a dental laboratory.

A certificate of the Clerk of the City of Edmonton Police Court that William Lees had been convicted on

three different occasions for practising the profession of dentistry at the City of Edmonton in the Province of Alberta, being a person not holding a valid certificate of license to practice dentistry.

The practitioner, F. L. Buggins, although admitting that he practised his profession at 10946-98th Street, as charged, claimed that he was conducting his business separate and distinct from William Lees, and was not collaborating with him in defying the provisions of the Alberta Act.

The Discipline Committee considered, however, that the charge preferred against the licenseholder had been sufficiently proved, and directed that the whole facts be submitted to a Judge of the District Court of the District of Edmonton. In accordance with this finding of the Discipline Committee, His Honor Judge J. L. Crawford, appointed March 4th, 1927, as the date on which the hearing of the charge would take place.

On the charge being heard by His Honor, Judge J. L. Crawford, Mr. A. Blair Paterson, counsel for the Alberta Dental Association, proved all of the facts as above set out, and, in addition, proved that the practitioner, F. L. Buggins, did not purchase from any of the dental supply houses in Edmonton, either by open account or C. O. D., but that William Lees, in addition to purchasing for cash, carried an account with the dental supply houses, and that certain of the items purchased by him were items used exclusively for operative dentistry as distinct from prosthetic dentistry.

After hearing the evidence the Court intimated that it was satisfied from the evidence that the practitioner, F. L. Buggins, had practised his profession by stealth, and had countenanced, assisted and collaborated with William Lees to defeat the provisions of the Alberta Dental Association Act, and had therefore been guilty of unbecoming and improper professional conduct.

As the practitioner intimated to the Court that it was his intention to leave the Province of Alberta, the Court adjourned the matter for one week.

On the matter again coming before the Court on the adjourned hearing on March 11th, the representative of the practitioner, intimated that F. L. Buggins had left the Province. However, as counsel for the Alberta Dental Association feared that the practitioner might only have left the jurisdiction

of the Court until the present charge had blown over, he requested that the Court defer passing sentence in the meantime, reserving the right, however, to the Association, should the practitioner, F. L. Buggins, return to the Province of Alberta at any time within one year from the 11th of March, 1927, to apply for suspension of his license on the evidence already submitted. This the Court granted without hesitation and made an order accordingly.

Hygiene, Dental and General

J. F. WEATHERILL

Hygiene, or the science of healthful living, furnishes to man the basis for a rational control over those habits and conditions of existence which affect, for good or ill, the smooth and normal operation of the mechanism of the body. In the development of these habits the onus rests primarily upon the individual. The maintenance of healthful living conditions is, however, more or less beyond individual control, and responsibility rests upon organized society.

Let us consider the individual in respect of his habits of life. The functions of man, as an animal, are fourfold, namely: assimilation, action, sensation and reproduction, or in simpler terms, eating, working, thinking and breeding. The formation of proper habits along each of these lines then is of paramount importance.

The question of eating is with most individuals more a question of what do I like, than what does my body require me to eat to maintain a properly nourished condition. The latter may be summed up in the following: The consumption of proper quantities of suitable food, adequate digestion,

transmission of digested foods to parts of the body where they are to be used up, the burning of the fuel foods, the rebuilding or growth of the tissue and the elimination of the waste products of cell activity.

From all the various kinds of foods used for human consumption there are only six kinds of substances or digestive products finally reaching the body tissue through penetration of the intestinal wall, namely: water, amino acids, simple sugars, products of fat digestion, inorganic salts and vitamins. These substances will be considered separately.

Water:—Two thirds of the body weight, and three quarters of the weight of the active body tissue is made up of water. Blood and lymph are mainly water, carrying food to the tissues and removing from them the waste products of combustion. The water passing through the kidneys eliminates waste nitrogen from the body. Water is taken into the body from the diet and eliminated from the body through the lungs in the form of moisture, through the skin in the form of sweat and through the kidneys in

the form of urine. At least six glasses of water alone should be consumed by the average individual daily.

The amino acids supply the material from which new tissue is built up in the growing body, and from which the worn-out tissue is replaced in the adult. These acids are derived from the protein foods consumed, among the most common of which are meat, fish, milk, eggs, etc. The average diet supplies more often an excess, rather than a deficiency of protein material.

The Simple Sugars are compounds of carbon, hydrogen and oxygen which, when burned in the body, are broken down into carbon dioxide and water, both of which are easily eliminated waste products, at the same time supplying a great quantity of energy during oxidation. During digestion the carbohydrates are reduced to simple sugars, which are rapidly absorbed, beginning in the stomach, thus supplying the body with fuel in a very short time after consumption.

Fats are decomposed, passing through the walls of the alimentary canal in the form of soap, glycerine and fatty acids. They are better fuel foods than sugars as the same weight requires more oxygen for combustion.

The Inorganic Salts of sodium, calcium, potassium, sulphur, iron and phosphorus are utilized by the body, the calcium salts forming the hard structure of bone and also the dentine of the tooth.

Vitamines—the chemical composition of which are unknown. Deficiencies in the diet of these substances will result in Beri-Beri, Rickets, Scurvy, etc.

We have seen the functions of the various types of foods and it remains for us now to establish a diet so balanced as to give the required amount of each in the proper proportions.

On the other hand a person may eat the proper amount of foods known to be of value, and yet through various mental or psychic disturbances the consumer may not derive the proper

benefit from it. The food eaten should above all, be agreeable to the patient, and appetizing, and must be eaten in suitable fashion. The consumer must be in proper mental state, and the body activities must not seriously interfere with digestion. Children should not be scolded at meals, or should not be allowed to eat a meal while in a state of passion.

Mastication plays a great part in digestion, as the digestion of the sugars and the preparations for their absorption are begun in the mouth. Then again, food well chewed will be more diligently acted upon by the gastric juices than that food which has been bolted and reaches the stomach in large, coarse pieces.

The elimination of the body wastes through the kidneys is made easier by limiting the protein diet so as to avoid an excess of Nitrogen, and by drinking large quantities of water so as to reduce the concentration of the urine.

Regular evacuation of the bowels, which is mainly the elimination from the body of the substances which have never passed through the walls of the alimentary canal, should be strived for, while constipation, or the slow movement of food along the intestinal tract, should be avoided by the use of plenty of water, by the eating of foods containing roughage, such as fruit and vegetables, and by indulgence in suitable exercises.

Action. In studying the part played by exercise in the body we may do well to enumerate briefly its effects: viz—It strengthens the muscular system with the consequent advantages, such as the strengthening and enlarging of the lungs, and the strengthening of the heart. It aids the circulation and helps the body in its resistance to heat and cold. It also aids in oxidation, and in the elimination of waste, thus keeping the skin clear, and generally improving the mental tone of the individual. It is presup-

posed here that the diet of the individual is sufficient.

You may wonder how all these benefits are derived!

Let us consider the muscular system, which constitutes two-thirds of the bulk and weight of the body. When in use, the muscle fibrils increase in size, but if allowed to be idle they begin to decrease in size until hardly more than connective tissue remains. When muscles reach this state, exercise of any kind is more or less of an impossibility, resulting in exhaustion and the consequent breakdown of the general health.

The muscular body then will consequently be more active than the underdeveloped one, with the advantages incident to such activity. Oxidation is increased from four to ten times by activity of the muscular system, as the output of carbon dioxide is increased by that amount.

It is necessary, then, for the professional man, or the man of sedentary occupation to acquire the habit of taking routine exercises in a gymnasium, or by some other means, to make up the deficiencies which the manual laborer does not have. Regularity in the taking of these exercises is essential and can not be overstressed. It would be far better to do without the exercise than to go through a strenuous form of exercise to which you are not accustomed, and which would leave you in a weakened state, with possible serious consequences.

Modern civilization, however, does not provide that we may all indulge in such a form of exercise, and we must look towards other means of procuring them; and these are admirably found in the choice of such pastimes as hunting, fishing, exploring and gardening, which is perhaps the best of all. Fast walking in the open, especially in the country, is invigorating and very advantageous.

The proper care of the eyes, though perhaps a little remote from the question of muscular activity, is extremely

important and might here be discussed. Care in the selection of a proper light for reading purposes, avoiding a paper that is glossy, and a print that is so fine as to necessitate holding it any closer than eighteen inches to the eyes, is absolutely essential. Intense and steady use of the eyes as in reading should be alternated by focusing the eyes on some distant object outside the window for a while, then returning to your reading.

Bathing should be regular, and it should be noted what type of bath is best suited to the individual. The hot bath opens the pores of the skin by stimulating the activity of the skin glands, and should not be taken too often, or before going out into the open air as it leaves the body highly susceptible to exposure to cold. Cold baths should not be prolonged over one minute, and should be followed by a good rub. The indifferent bath, with the water temperature at 80—90 deg. F. is neither depressing or stimulating, and is a good type of daily bath.

Sensation: depends upon the proper care and conservation of that exceedingly complex machine, the central nervous system. Upon this system depends the sensations of consciousness and the efficiency of our mental and physical activities. This great body system, like all other living tissues, increases through use its facility in the work it has to do, but demanding rest between periods of great activity, and which, if overused or abused becomes hypersensitive. The person becomes easily irritable and the system is unable to carry out its normal functions.

Proper care of this important machine, then, is of paramount importance. Concentration, habit, adequate rest and sleep and congenial occupations are important factors in its maintenance.

Reproduction: in its broadest sense involves the replacing of one generation by another in the best possible manner. This includes compliance with the laws of heredity, a knowledge

of the effects which the conduct of life may have upon the offspring and the best possible supervision over the hygiene of pregnancy and the early days of infant life, and the proper regulation of the sex life.

Hygiene of the Mouth

Nature has provided for the teeth a wonderful means for the maintenance of oral health. The form and arrangement of the teeth are the first factors and should be such that their relationship offers the highest degree of correlation. Each tooth performs its functions as a dependent unit in a perfect machine operated under the motive power of the muscles of mastication.

When the teeth are in normal alignment, the approximating surfaces of the teeth in each jaw are in actual contact at one point, known as the contact point, which prevents the crowding of food into the interproximal spaces, thereby protecting the investing tissues. Any deviation from the normal alignment, or the loss of any tooth, will result in impairment of function and a loss of the proper contact. Food material will become crowded between the teeth to establish a condition favorable to fermentation and putrefactive changes.

The teeth have been protected by nature in that they have for their outer covering the hardest substance to be found in the body, namely the enamel.

The role played by the saliva is also a very important one among the defensive or protective agencies; and its presence and constant renewal tends to maintain the normal environment of the teeth, and to overcome by its neutralizing effect the harmful action of fermentation. Generally speaking, saliva is composed of water, albumen, mucus, ptyalin and salts of potassium and sodium held in solution. The amount of the different components of the saliva will be affected by the physical condition of the individual, and by the kind of stimulation inciting its flow.

The action of the ptyalin content of the saliva is to convert starch into sugar during the process of mastication. Thorough mastication being essential to obtain the full effect.

The foregoing brief outline of nature's forces of tooth protection and maintenance of hygienic oral conditions may, and should in this age certainly be supplemented by artificial means.

Daily care of the teeth: Caries of the enamel is largely due to the retention or confinement of food material in locations favorable to its remaining undisturbed for a sufficient period of time for fermentation to take place. As this then is the cause of the formation of cavities and decay, it is obvious that if this food material can be removed before the bacteriological action takes place, the dissolution of the tooth substance will be prevented. However, even with the most scrupulous care, it is impossible to entirely prevent caries in highly susceptible mouths where it is very active, but the frequency of occurrence may be greatly lessened.

The tooth brush is invaluable in the daily care. It should be of suitable size to suit each individual case, not too large to pass between the lips and the cheek and the surfaces of the teeth, and with bristles neither so stiff and resistant as to cut the soft tissue, nor so soft as to be ineffective in the removal of soft material. There is no definite rule that should be followed so long as it is done thoroughly. The brush should be used in conjunction with an efficient paste or powder.

The dentist should be visited at least twice a year from the time the patient is two years old, and it is the primary function of the dentist to instruct those coming under his care in such a way as to make clear the measures at hand for the prevention of dental caries.

Ever since the investigations of the late W. D. Miller, established the connection between various infections and

diseased states of the teeth, stomatologists have recognized the importance of dental diseases in relation to public health. Not so very long ago the diseases of the teeth were ignored, or looked upon as trivial, but with the increased knowledge and the education of the people along proper dental health lines, such an attitude is gradually passing away, and now dental diseases are looked upon as serious.

How do oral malhygiene and diseased teeth tend to injure health, you might ask? In the first place defective teeth impair the power of efficient mastication and the proper preparation of food before it enters into the stomach, both of which tend to impair the first stage of digestion.

There are also the various diseases resulting from reflex irritations of the teeth, some of them serious, caused by pathogenic micro-organisms inhabiting the mouth, gaining access into the system or interfering with the physiological processes of the alimentary canal. These micro-organisms may gain access in several ways, the most common of which is through the pulps of carious teeth, and through deep wounds such as after extraction. These exposed pulps appear almost to be in-

capable of offering any effective resistance to the entrance of the bacteria, and it is not long before the organism has found its way right through the apical foramen, where a dento-alveolar abscess is most certainly the consequence. Of course, the abscess so formed may be serious or trivial depending upon the nature and health of the surrounding tissues, the virulence of the bacteria and its ability to produce its toxins, and the resistance of the patient or his immunity or susceptibility to the organism.

The results of such an abscess may have a variety of effects upon the health of the individual, among which may be a diffuse cellulitis, or a secondary septicaemia and pyaemia which would probably have fatal consequences. It may also invade the antrum of Highmore and extend thence to neighboring sinuses.

These are just an indication of the effect of diseased teeth upon the general health, and make up but a small part of the twenty per cent. of the chronic diseases which, according to competent authorities, afflict mankind as a result of diseases of the teeth, and the unhygienic state of the mouth associated therewith.



King Edward Hotel, where the Jubilee meeting of the Ontario Dental Association will be held, on May 16, 17, 18, 19, 1927.

Dental Mechanics' (State) Award

From the Dental Science Journal (Australia)

(We are indebted to Dr. P. C. Charlton for the following summary of the new Award for dental mechanics. Dr. Charlton was Chairman of the Conciliation Committee composed of representatives of master dentists and mechanics, who held many lengthy meetings in order to arrive at a decision fair to all parties. The full text of the Award is too lengthy for publication in this journal, but a copy of it may be had at the Government Printing Office, corner of Phillip and Bent Streets, Sydney, for the sum of sixpence. Ask for copy of Dental Mechanics' Award as published in "Government Gazette" of 17th December, 1926.—Editor.)

Hours.—42. Must be worked between 8.30 a.m. and 6 p.m., but not after noon on Saturday.

Casual Labour may be engaged but, after fourteen days, engagements must be by the week. For the first 14 days, the employment shall be terminable by one day's notice on either side.

Engagements.—Preference must be given to the Union employee, if any, making application for the position, unless the employer considers him unsuitable, and he may then engage non-union labour.

It is not compulsory for a mechanic to join the Union, but should he leave his present employment and seek work elsewhere, and then be selected in preference to a Union employee, he must join the Union.

When technical classes are established for the training and examination of mechanics, no employer will have the right to employ a non-union man unless the latter joins the Union within fourteen days. This means that mechanics will be able to get certificates of efficiency after an examination by a body composed of dentists and

mechanics. This is important as dentists will be in a position to demand efficiency certificates.

Apprentices.—Four years to be indentured. The proportion to be 1 to 4, 2 to 5, 3 to 10. The employer for this purpose, is counted as a mechanic.

Invalid and slow workers must be paid the above rates unless a permit is obtained from the Industrial Registrar.

No employee shall be reduced in wages as a result of the Award. If a mechanic is classed as a metal worker, and has been employed on that work, he must not be reduced to the wage of a vulcanite worker, even if no metal work is being done.

The Secretary of the Union has the right of entry to any workshop, but 24 hours notice must be given to enter any workshop in a private house.

The Award applies to New South Wales excepting the County of Yancowina.

Notice must be sent to the Industrial Registrar and Union Secretary with particulars as to age, date of indentures, names, etc. An apprentice cannot work overtime unless in charge of the dentist or mechanic. Should he do so, 1/6 per hour, plus 1/6 tea money, must be paid.

Wages.—

1st year 1st 6 months		18/9
2nd		25/—
2nd year 1st		31/3
2nd		37/6
3rd year 1st		47/—
2nd		56/3
4th year 1st		68/9
2nd		81/3

After 4 years, he becomes a journeyman.

Female Work.—Assistants may only polish (new work excluded) or cast

inlays. Should they be employed on other work, such as setting up, packing, etc., they must be classed as mechanics, and paid the Award rate, which is three-fifths of the male rate.

Overtime.—Time and a half and double for public holidays shall be paid, plus 2/- tea money. After 12 hours' overtime, notification must be sent to the Secretary of the Union. This clause is inserted to prevent employers over-working their staff instead of engaging more labour. For instance, if 36 hours' overtime be worked in one week, there is certainly room for another employee. Books must be kept for that purpose.

Four weeks is the limit set down for continuous overtime unless with consent of the Secretary of the Union.

Outworkers.—All work must be done by *bona fide* dental mechanics in a *bona fide* workshop. This clause is designed to stop mechanics from picking up work and doing it at home to the detriment of others. Two or three dentists may employ one mechanic,

provided he works in a *bona fide* work-room.

Technical Education.—When classes are established, apprentices must be given time off, with pay, to attend these classes if in hours of work, but only one afternoon is allowed per week.

Annual Leave.—10 days must be given, exclusive of all public holidays and Union Picnic day.

Wages.—Adult Males:

£5/6/- per week—Vulcanite workers, including backing of teeth and bands.

£5/18/6 per week—Metal workers.

Females—Three-fifths of above rates.

This is an increase of 3/- for vulcanite workers, and 5/6 for metal workers per week in favour of new Award.

Since the last Award, under the basic wage employees were entitled to 2/- increase, but did not apply for it; hence the real increase in wages is very small. Any new basic wage naturally affects this Award.

SOCIETIES

Academy of Dentistry, Toronto

Dr. Robb gave a brief resume of the year's work which included seven stated meetings, ten executive council meetings and five study groups with an enrolment of 67.

Study Groups.	Enrolment	Meetings Held
Exodontia,		
Leader, Dr. Amy..	17	15
Anesthesia, Leader,		
Dr. G. L. Frawley	10	8
Orthodontia, Leader,		
Dr. Geo. Grieve ..	15	10
Full Dentures, leader		
Dr. F. Cole	11	10
Children's Dentistry.	14	3

The report of the Oral Hygiene Committee was comprehensive and indicated an immense amount of work accomplished. Its adoption moved by Dr. A. Day seconded by Dr. Ed. Grant, was carried.

On motion of Drs. Spaulding and Hendry, Drs. R. A. Dunlop and McMulin were appointed Auditors.

The Essayist of the evening, Dr. E. C. Kirk of Philadelphia, was introduced by Dr. Harold Clark, who occupied the chair for the balance of the evening.

The subject of the address was "The Mutations of the Mandible in Relation to Prosthesis". In a most interesting manner, Dr. Kirk reported the result of three years' research in the vertical movements of the mandible and the apparent dependence of the occlusal curve on the Wadsworth Triangle.

An interesting discussion by Drs. W. E. Cummer and A. D. Mason took place.

Dr. Clark expressed the appreciation of the Academy for the excellent ad-

dress which was heartily applauded. The meeting adjourned for refreshments at 10.35 p.m. Minutes of the Seventh and final stated meeting of the Academy of Dentistry, Toronto, for season 1926-27 was held in Osler Hall, 13 Queen's Park, on Wednesday, March 16, 1927.

The meeting opened at 8.10 p.m. with the President, Dr. H. G. Robb, in the chair.

The minutes of the sixth meeting were read and approved.

The Treasurer, Dr. H. H. Cummer, presented his report and stated that after paging outstanding Bills there would be a balance of between \$600.00 and \$700.00 at the end of the year, slightly in excess of the balance one year ago.

The report of the Scrutineers was presented by Dr. A. M. Hord. The following Fellows will form the Executive Council for the ensuing year: Past Pres., Dr. H. G. Robb; President, Dr. R. S. Woollatt; Pres.-elect, Dr. W. B. Amy; Secretary, Dr. A. M. Hord; Treasurer, Dr. T. E. C. Butler; Councilors, Dist. 1, Dr. Veitch; Dist. 2, Dr. J. W. McDonald; Dist. 3, Dr. G. S. Frawley; Dist. 4, Dr. F. E. Risdon; Dist. 5, Dr. Ken. Harris.

Moved by Dr. Willmott, seconded by Dr. Crouch, that the ballots be held by the President for two weeks and then destroyed. Carried.

A few remarks were made by Dr. Woollatt thanking the Fellows for the honor they had conferred on him and asking for their continued co-operation.

Minutes of the Sixth Stated Meeting of the Academy of Dentistry, Toronto, held in Osler Hall, 13 Queen's

Park on Wednesday, Feb. 16, 1927.

The meeting opened at 8.15 p.m. with the Pres.-elect, Dr. R. S. Woollatt, in the chair, members present 76.

Dr. Woollatt gave a short address outlining a few of his plans and desires for the next year's programme.

The minutes of the Fifth Meeting were read and approved.

Announcements were made regarding the final meeting and instructing the Fellows how to vote.

Dr. Woollatt then introduced the first Speaker of the evening, Dr. Thos. Cowling, whose essay on "The Structure of Metals" was both interesting and instructive.

It opened the path of research along an unbeaten trail which will be of great assistance to Dentists.

The second essay was by Dr. A. E. Webster, his subject being "Factors which influence the Longevity of the Human Denture". The essayist empha-

sized the importance of the General Family Dentist as the greatest aid in prolonging the life and usefulness of the teeth.

Dr. L. F. Krueger, the third speaker, presented a combined address and clinic on the proper methods of making a cavity, gaining separation, using matrices and inserting an amalgam filling. He laid emphasis on the value of a perfect amalgam filling as a great aid in prolonging the Longevity of the Human Denture by preventing infection to the periodontal membrane from without and within.

Dr. J. W. Armstrong asked questions regarding mechanical mixing of amalgam which were answered by Dr. Krueger.

A hearty vote of thanks to the three essayists was happily moved by Dr. A. M. Hord and unanimously carried by loud applause.

The meeting adjourned at 10 p.m.

Canadian Dental Association

The following special meetings will be held in connection with the meetings of the Canadian Dental Association with the Ontario Dental Association at the King Edward Hotel, Toronto, May 16-17-18-19.

Meeting of the provincial delegates, re proposed changes in the Constitu-

tion of the Canadian Dental Association, Saturday, May the 14th.

Business meetings of the Canadian Dental Association and of the Executive Council on Tuesday the 17th.

Sincerely yours,

J. Stanley Bagnall.

A business meeting of the Canadian Dental Association, and of the Executive Council of the Canadian Dental Association will be held in Toronto at the King Edward Hotel during the joint convention of the Ontario Dental Association and the Canadian Dental

Association. Time of meetings will be announced later.

Toronto—King Edward Hotel—May 16-17-18-19.

Yours very sincerely,

J. Stanley Bagnall,
Secretary.

The Canadian Dental Association at the Diamond Jubilee Convention of the Ontario Dental Association, King Edward Hotel, Toronto, May 16, 17, 18, 19, 1927

The Canadian Dental Association will meet in joint convention with the Ontario Dental Association at the King Edward Hotel, Toronto, on May 16, 17, 18, and 19th. This will be the sixtieth anniversary of the Ontario Association and an interesting and instructive programme has been arranged. The essayists will include Dr. C. N. Johnson, of Chicago; Dr. Robert H. Ivy, of Philadelphia; Dr. Harold J. Leonard, of Milwaukee; Dr. Russell W. Tench, of New York; Dr. W. D. N. Moore, of Chicago, and Dr. A. J. McDonagh, of Toronto.

The Canadian Dental Association will have its meeting to consider the question of reorganization on Tuesday, May 17th, at 2:30 and the report of the executive and of the delegates appointed by the various provinces will be presented at that time.

The Entertainment Committee has been quite active and has arranged for a big birthday party at Hart House on Monday night, a Re-union Dinner on Tuesday at noon, a Dinner Dance at the King Edward on Tuesday night, an Oral Hygiene Dinner on Wednesday at noon, class gatherings and theatre parties on Wednesday night, and a big golf tournament on Thursday afternoon. The golf tournament will decide the Canadian and Ontario Championships and many valuable prizes have been donated. Word has just been received from a firm of jewellers in London, England, that the beautiful Mallory Diamond Jubilee Trophy has been shipped to Canada and that a replica which will become the permanent property of the winner

is also being forwarded. This trophy will be held for one year by the golf champion of the Ontario Dental Association and each year a replica will be presented to the winner. The arrangements for the tournament are in the hands of the Toronto and District Association.

The special speaker for the Re-union Dinner will be our own Don Gallie, of Chicago, and Prof. Klotz of the University of Toronto will give the address at the Oral Hygiene Dinner.

Provision has been made for reduced fares on all the railroads and delegates are urged to get their railway certificates.

The following is the list of clinics and each dentist in attendance will be able to see any six he may choose. Forms for the advance selection of clinics will be sent to those who have paid their Ontario membership fee since the beginning of this year. The membership fee for the Ontario Dental Association is ten dollars and joint membership in the Ontario Dental Association and University Alumni may be secured by paying eleven dollars and fifty cents. Any person desiring additional information in regard to the Canadian Dental Association should communicate with Dr. J. Stanley Bagnall, 34 Larch St., Halifax, N. S., and those who would like information in regard to the arrangements for the Convention should write Dr. Fred J. Conboy, Spadina House, Toronto.

CLINICS

Tickets will be collected at all clinics. All the clinics will be located on the Second or Seventeenth Floors.

- I. *The Hamilton Clinic Club.*
Drs. Fred. Williamson, Maxwell Morrow, Al. Lester, Joe Stewart, Hamilton, Ontario.
Subject: "Porcelain".
- II. *Dr. Russell W. Tench, New York, N. Y.*
Subject: "Full Dentures".
- III. *Dr. Robert H. Ivy, Philadelphia*
Subject: "How to make a complete mouth examination."
- IV. *Dr. W. D. N. Moore, Chicago.*
Subject: "Crown and Bridge Work."
- V. *Dr. John Jacob Posner, N. Y.*
Subject: "Local Anaesthesia Simplified."
- VI. *Dr. Abram Hoffman, Buffalo.*
Subject: "Simple Appliances for Orthodontic Cases."
- VII. *Dr. F. E. Roach, Chicago.*
Subject: "Partial Dentures."
- VIII. *Dr. Harold J. Leonard, Milw'e.*
Subject: "Present Day Surgical and Therapeutic Practice on the Treatment of Periodontoclasia."
- IX. *Dr. A. E. Webster, Dr. L. F. Kreuger, Dr. Hugh Ross, Dr. W. T. Holmes, Toronto.*
Subject: "Common Sense Root Canal Therapy."
- X. *Dr. A. D. A. Mason, Toronto.*
Dr. C. A. Kennedy, Toronto.
Dr. J. Aileen McDonagh, Tor.
Dr. W. S. Madill, Toronto.
Subject: "What the Family Dentist Must Do for his Young Patients."
- XI. *Dr. Wallace Seccombe, Toronto.*
Dr. Edmund A. Grant, Toronto.
Subject: "What Should the Dentist Tell his Patient About the Teeth and Their Care?"

Pain Described by Learmonth

Pain may assume any one of a number of different forms, and it is often possible to correlate these with the differing physiological functions of the individual fibres of an anatomic nerve. Thus it may be "sharp" or "lancinating", as if pain fibres were affected; "hot" or "burning", as if thermal fibres were affected; or "full" or "bursting", as if pressure fibres were affected. Further, it may be continuous, it may appear in paroxysms, or paroxysmal exacerbations may be superimposed upon continuous pain.

Again, it may remain strictly localised to one spot, or it may radiate from the point of its greatest severity. There is, then, much to be learned by questioning a patient who complains of neuralgia, and while there is no disease, with the exception of fully developed major trigeminal neuralgia, in which the diagnosis can be made from the history alone, certain combinations of the characteristics I have mentioned may narrow the diagnostic field, and possibly direct attention to some special cause for the pain.

Academy of Dentistry, Hamilton

The regular monthly meeting of the Academy of Dentistry of Hamilton was called to order by its president, Dr. Joe Stewart, at the Connaught Hotel at 7.30, March 17, 1927, following a dinner. Dr. Field reported on the progress of a ladies' night which was to be held at the Brant House when many forms of entertainment were to be provided.

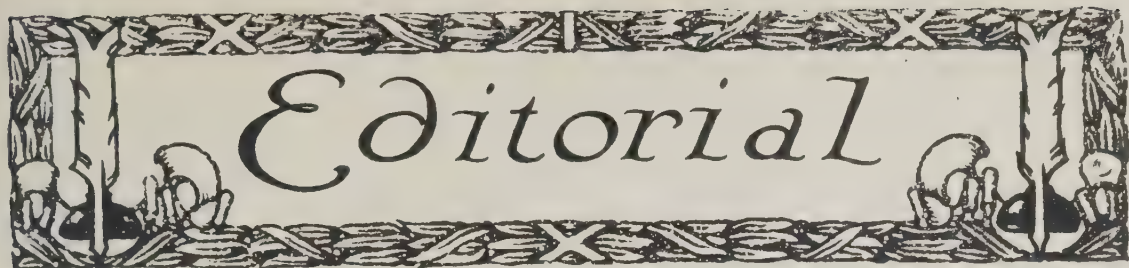
Dr. Harold Clark of Toronto, was present as a guest of the society and a host of Dr. Edward C. Kirk. Before Dr. Clark was asked to introduce Dr. Kirk, the guest of the evening he (Dr. Clark) was made the recipient of a very handsome walking cane. Dr. W. G. Thompson made the presentation and Dr. Clark responded.

Dr. Kirk said, in introducing his subject, it was only a report of progress in a form of prosthesis introduced from the Pacific coast by Dr. Frank Wadsworth. It was Dr. Bonwell who first made a scientific study of the movements of the jaw. He gave the initial thought to balanced occlusion. Bonwell thought that the condyles and the median line of the lower incisors formed an equilateral triangle. This, however, Dr. Cryer, the anatomist, did not believe. It was thought Dr. Bonwell came to his conclusions on an entirety to few cases. The present study does not include the lateral movements of the jaw, just the opening and closing movements. Dr. Wadsworth came

on to Philadelphia to present his technique which he claimed, worked every time, but on being asked why, he could only say, "I don't know." It is this why that Dr. Kirk is undertaking to solve. He has made a study of many skulls and would seem to be on the road to solve some of the problems in orthodontia and periodontia, if not in prosthodontia. Each case must be studied by itself. There are general principles underlying all, but each has its own peculiarities.

Dr. Kirk showed several skulls on the screen which illustrated different types of curve of spae as well as different angles of the coronoid process. It would appear that the form of the lower portion of the face is largely influenced by the action of the muscles, the chief of which is the temporal. By this observation an explanation can be made for the obtuse angle of the jaw in advancing years and the protusion of the chin and the closure of the bite in the molar region.

It would appear that an equilateral triangle is formed by drawing a line from the condyle to the occlusal surfaces of the lower incisors and from here the other two sides meeting at a point on the arc of a circle made by the curve of spae. It is Dr. Kirk's idea that the curve of spae is not made for any particular purpose, but is the consequence of muscular action.



Editorial

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Vol. XXXIX

TORONTO, APRIL, 1927

No. 4

There does not seem to be a very clear idea in the minds of some dentists what a specialist consists in, if one is to judge from private cards and occasional announcements. Once in a long while one sees an announcement such as this, "Doctor A. Z. Spink, D.D.S., L.D.S., Honor Graduate of the University of Toronto, Specialist in Extracting Teeth, Crown and Bridge Work and Gold Inlays." It has been said that some have graduated who did not know any better than to write such an announcement as the above. In the words of the late Dean Willmott, we are inclined to think that the dentist who would write such an announcement is more knave than fool.

There is a kind of medical and dental specialist who will accept for treatment everything from extracting teeth to insanity though he only speaks and writes on the subject of cancer or peridontia. If he is a dentist he never admits that he fills a tooth or makes a denture though he never passes a patient on to another. He writes voluminously and speaks with power and conviction on his chosen subject and admits he is a specialist. He joins all the societies of his specialty. To him a specialist is one who gives special attention to one, two or three subjects, but not to the exclusion of others. He accepts patients from other dentists who are seeking the advice of specialists. He does not accept the definition of a specialist as one who gives his exclusive attention to one subject.

There will be no pseudo specialists in dentistry in Alberta. In the March issue we published an amendment to the dental act which provides a special qualification for specialists. The new sections read as follows. We commend this section to the dental law makers of other provinces.

"28—(1) No person shall advertise or hold himself out to the public as a specialist or as being specially qualified in any particular branch of dentistry or dental work, without having received from the Registrar of the University of Alberta a certificate of having complied with such con-

ditions precedent as to qualifications or fitness as may be prescribed by the Senate of the said University.

"(2) The said conditions may be based either upon the possession of certain diplomas or other professional qualifications, or upon compliance with prescribed tests, by way of examination or otherwise.

"(3) Any breach of this section shall be deemed to be unbecoming and improper conduct, within the meaning of section 31 of this Act."

3. This Act shall come into force

The general practitioner of dentistry like the general practitioner of medicine has a wide field to cover. On the whole the sum total of his knowledge of the subject is greater than the specialist. This must be so else his clientele would be poorly served. There can be little doubt but the specialist can serve his clientele in his special field better than the general practitioner but some one must take the broad view and determine whether the patient needs the services of a specialist or not. It is just here where the general practitioner comes in.

The fact that a general practitioner has come to the conclusion that some one else can serve his patient better than he can opens the field to bidders for the patient. Then arise those fine points in ethical relations among professional men and patients. In medicine these relations have been pretty well established, but in dentistry there is much to be desired. In medicine there is the family physician, in dentistry the family dentist hardly recognizes himself. The family physician feels a personal responsibility for the good health of his patients, the dentist only feels a responsibility for fitting a bridge or treating a pus pocket, it rarely occurs to him that his patient commits his dentures to his keeping, and if he should fail to refer his patient to an orthodontist, an exodontist or a periodontist when required, he had failed in his function as a family dentist. And no matter how many specialists have been called in from time to time, it is the family dentist who is at all times responsible for what happens. Let any dentist recommend his patient to a specialist and he makes a bungle of what was undertaken and he will soon find that he will be blamed, though he wasn't even present at the treatment. The dentist does not get free of his responsibility by recommending his family patient to go to someone else.

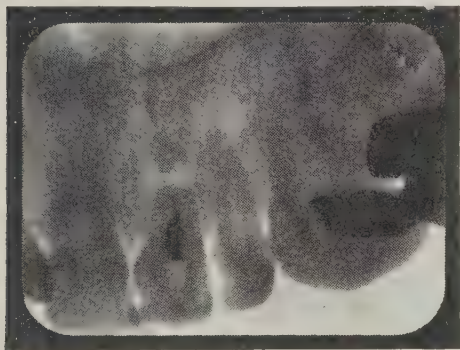
This principle has been recognized in medicine and surgery. The physician makes a tentative diagnosis, he calls a surgeon who operates, but never thinks of taking the patient away from the physician or assuring responsibility for the after-treatment or other treatment. The physician thus in charge keeps the direction of the case and is entitled to a fee. In dentistry too often the specialist assumes full authority, not only for the diagnosis and the treatment but also for the disposition of the patient. The general practitioner who sends his patient to an orthodontist does not surely yield up all responsibility for the future of his patient's denture. It was because of that interest that the patient was sent to a specialist. It is only the general practitioner who can serve all the needs of a dental patient so the specialist cannot have a family practice. In view of this the general practitioner is entitled to a fee for a general supervision of cases sent to specialists as occurs in general medicine. There is no thought in this of making the specialist a collecting agency for the general practitioner. But there is the thought of having the general practitioner paid for the service he has rendered his patient in guiding him through a long life with a good denture.

CORRESPONDENCE

Editor Dominion Dental Journal,
Dear Dr. Webster,—

I am enclosing an interesting radiograph, on which I would like your advice as to the best mode of procedure. The case has the following history. Presented June 1st, 1926, right upper central with sinus, no soreness, tooth slightly loose. Opened through lingual pit, treated and killed root with osogen. Sinus promptly healed, but appeared again this month when I had the radiograph taken. The patient doesn't recollect anything that would cause the fracture. He is a young man about 26 years of age and in good health.

My present idea is to remove the fractured tip, but I would like to hear



from you before going ahead. Also does the condensation at root of left central signify anything pathological.

I think this picture is a good argument for full X-Ray examination as it also shows the lateral involved.

Yours very truly,

F. A. E. Starr.

Dear Doctor,—

It is certainly unusual to see a fracture of a tooth root without a history of trauma, especially when the blow was sufficient to cause the death of the pulp of the lateral. The apparent condensation over the central is not likely pathological, however the pulp should be tested for vitality. The central may have had some involvement when the other central was fractured. There appears to be some loss of density of bone about the lateral which would indicate a possible injection. Your suggestion removing the root tip is advisable as well as the treatment of the lateral. It does indicate the value of an X-Ray, especially in the absence of a history of trauma. Without the X-Ray the most careful and experienced diagnostician would hardly have thought of a fracture and an infected lateral.

Golf at the Canadian and Ontario Meeting

A combined meeting of the Canadian and Ontario Dental Golf Associations will bring the 1927 Canadian convention to a rousing close. The tournament will be held on Thursday afternoon, May 19th, at the Thornhill Golf and Country Club situated at Thornhill on Yonge Street. All are invited to participate. Those who do not play the game will be welcomed to join the golfers

(and duffers) at dinner at 7.30 in the club house.

Competitions will be held for the following cups:

1. Canadian Championship—best gross score, open, donated by the Nova Scotia Dental Association;
2. Cup for Annual Competition (C. D. A.)—best net score, donated by Dr. George Kerr

Thomson, Halifax, N.S.;

3. Cup for Annual Competition, (C.D.A.), donated by Dr. F. Rous Mallory, London, England.
4. Ontario Championship— best gross score, (O. D. A.), donated by Dr. F. Rous Mallory, London, England.

In addition to the above, the dental manufacturers and dealers have been very generous in supplying the committee with numerous and desirable prizes.

It will assist the committee if those wishing to attend this entertainment would register at the registration booth at the King Edward

Hotel. We also wish to acknowledge our thanks to the following donors of prizes and hope they will join in the game with us: Ash-Temple Co., L. D. Caulk Co., Dental Co. of Canada, Goldsmith Co., Lavis, National Refining Co., and the S. S. White Co.

The fee including green fees, dinner, prizes and entertainment will be \$3.00. Join us and become acquainted as never before.

Local committee representing the officers of the Canadian and Ontario Dental Golf Association:

C. V. Morton, Chairman.
F. R. Knight,
A. D. A. Mason.



THE HAMILTON CLINIC CLUB

Drs. Morrow, Lester, Stewart and Williamson. They will present a Clinic on "Porcelain" at the Joint Convention of the Canadian and Ontario Dental Associations.

Meeting Today's Dental Exactments

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The Vital Claim Made for Pepsodent by its Makers

THE makers of Pepsodent have but one thought in mind; one goal to strive for in their product.

That is, to supply the profession with a tooth paste that embodies the LATEST scientific findings in a dentifrice; findings based on the **dominant dental opinion of TODAY.**

Thus, in Pepsodent, you find what the profession itself holds as embodying the present-day ideal in a dentifrice.

Hence the Pepsodent formula is ever being further improved. Important changes within the last five years, have been made. As the profession advances, Pepsodent advances with it.

Today it offers the most recent exactments of the profession in the harmless removal of the mucin plaque—or film—from teeth; the film which the profession largely holds responsible for tooth decay and pyorrhea; in firming and giving tonal quality to the gums, and in other ways.

Those exactments call for 9 distinct factors today. And these are today embodied in Pepsodent. Should these exactments call tomorrow for other factors, you will find them tomorrow in Pepsodent.

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Edmonton Dental Club Banquet the First Graduating Class

Dr. John W. Clay of Calgary was the speaker at the Dental Club banquet, held Wednesday evening at the Macdonald hotel. Dr. Clay, who is the president of the Dominion Dental Association and vice-president of the Dominion Dental Council, outlined important aspects of the profession.

J. W. Gerrie was the toast-master, Dr. Clay's speech was in reply to the toast of "The Profession", which had been proposed by G. R. Gibson.

Dr. Tory responded to the toast to the University, which had been proposed by B. W. Richardson, "The Faculty" was proposed by Dave Hawthorth and replied to by Dr. H. E. Bulyea. The first graduating class

was toasted by Dr. A. B. Mason and W. P. Calhoun replied on behalf of the seniors. Dr. G. J. Hope, Dr. Sneddon and Dr. A. E. Jamieson also spoke briefly.

A program of music was given by Sperry Fraser, W. C. Jansen and Roy Thorpe.

Joe Burstein presented a memorial gift to the department of dentistry which was received by Dr. Gilchrist. The members of the first class to graduate in dentistry from the University of Alberta were the guests of honor. They are: Art. Ahrens, W. P. Calhoun, Joe Burstein, Jack Gerrie, L. E. Smith, E. Wilkinson and G. D. Sutherland.

The Dental Society of Western Canada

Reminder—That the Dental Society of Western Canada meets in Edmonton, Alberta, May 25, 26 and 27, 1927.

Place: Macdonald Hotel—The most commodious, comfortable and convenient place obtainable for this meeting.

Clinicians: Dr. Fred Molt (Chicago)—Oral Surgery, mouth preparation, radiographic interpretation.

Dr. Robt. Gillis (Hammond, Ind.)—Full denture difficulties, articulation, regrinding, etc.

Dr. Fred Conboy (Ont. Health Dept.)—Ethics, economics, practice building, etc.

Dr. W. I. Ferrier (Pres. Wash. State Assoc.)—Indication for and practical demonstrations of gold foil insertion

Table Clinics (Not yet Completed)—Vincent's Infection. Impressions, full, in both compound alone and in com-

bination with plaster, and partial in compound. Non-cohesive foil, orthodontic problems, Jackson's removable orthodontic appliances, jacket crown work, clinic on new substitute for rubber in denture work, is only a partial list.

Entertainment—For member and ladies.

Exhibits—Numerous and educative.

Motorists Note:—The Highway Dept. of our Provincial Government informs us that well over half the 200 mile road from Calgary to Edmonton is now surfaced with gravel, the rest to be completed by June 1st. In any case, all the bad spots are now done. A side motor trip to Banff from Calgary (90 miles) could be taken over gravel all the way.

American or B. C. visitors can obtain complete information on the

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Alberta roads south of Calgary from Dr. L. T. Allen, of Lethbridge, or Dr. M. L. Moore, of Medicine Hat.

Dr. M. M. Dunsworth, Tegler Building, Edmonton, will make hotel reservations for anyone notifying him.

We have already received congrat-

ulations on our succeeding in obtaining such a variety of excellent clinic material. Can you really afford to let these men come and go without benefitting from their experience?

LESLIE MCINTYRE,
Chairman of Publicity

On Feb. 5th, Dr. Wallace Seccombe, Dean of the Dental Faculty, Toronto University, visited Edmonton on his return trip from the coast. In the morning he visited the Dental Dept. of Alberta University and went into conference with the President, Dr. Tory, on the subject of standardizing of dental preliminary education throughout Canada.

The Edmonton Dental Society had postponed its monthly meeting till Dr. Seccombe could be present as the

speaker, and in the evening about forty members gathered to hear his good talk on dietetics. This subject had received considerable attention from the local dentists, so Dr. Seccombe's talk came at a very opportune time, and was well received.

On Sunday the Doctor renewed several old acquaintanceships, and his time was well spent in establishing that contact and understanding so necessary at this present stage in Canadian Dental History.

DENTAL OFFICE FOR SALE—In Edmonton, Alta. Excellent location, with two Medical Doctors. Apply Edmonton Journal, Box 647.

DENTAL OFFICE FOR SALE—Bloor St. West, Toronto; or would sell equipment separately; used only a few years; good reason for selling. Box 00, Dominion Dental Journal, 73 Richmond W., Toronto 2.

DENTAL OFFICE FOR SALE, TORONTO—Practically new equipment consisting of Ritter Chair, Webler Unit & Ritter Engine, Ritter X-Ray, Gas. Low Rent and fairly well located. Apply Box 45 Dominion Dental Journal, 73 Richmond W., Toronto.

DENTAL OFFICE FOR SALE—At City limits, Toronto, in rapidly developing section. S.S.W. Unit and engine, Ash Chair. Four year lease at \$25 per month. A good location for some one. Apply to Box 47, Dominion Dental Journal, 73 Richmond W., Toronto.

FOR RENT—Dental Suite, five rooms and bath, heated; Royal Bank Building, Yonge & Sherwood Ave.; well known dental office. Phone Manager, Hudson 0142.

Dominion Dental Journal

Vol. XXXIX

TORONTO, MAY, 1927

No. 5



John Clay, D.D.S, Calgary, Alta.
President Canadian Dental Association.

ORIGINAL COMMUNICATIONS

The Treatment of the Maxillary Sinus

ARTICLE II—BY FULTON RISDON, M.B., D.D.S., F.A.C.S.

Openings through the alveolar process leading into a space are always suggestive of three conditions if not more,—but, clinically speaking, of three. First: acute, subacute or chronic osteomyelitis in the region of the apical area of the extracted tooth; secondly, a cyst of some size with or without the inflammatory condition of bone (the cyst lined by squamous or columnar epithelium); or thirdly an opening into the Antrum of Highmore with or without the Osteomyelitis and complicated by a cyst and an infected antrum. In this last condition one should make some exceptions, that is, the lining of the antrum may not be thickened or polypoid, and if any infection exists it is due to the infected bone about the apical area of a tooth or teeth in this position.

There are other conditions that one should consider, but we will only mention them briefly here. These are to be considered clinical exceptions, but should be kept in mind when treating cases. We are not at this time entering into a classification of tumors of the jaws, but would say if the tooth or teeth on that side are loose or freely movable, and their contact points are lost, or separation between the teeth is occurring,—suggesting a force beneath acting in an expansile way,—one should be suspicious of malignancy. This is more likely to occur in people over forty and in the younger group; but conditions of this kind do occur even in children. The carcinoma of this area rarely has its origin in the mucous membrane of the antrum, but it is met frequently

enough to place the clinician on his guard; but the commoner variety of so-called cancer is to be found springing from the oral mucous membrane. This usually occurs as a white firm ulcer with cartilagenous raised edges, and in the early stages is not easy to diagnose. There is another condition which resembles the carcinoma, and that is sarcoma. It occurs in younger people, differs from the former in that there is seldom any ulceration in the mouth; in other words it does not spring from epithelial tissue, and spreads rapidly by continuity of muscle, bone and blood-vessels. There are other conditions that must be considered where one has an expansile condition. The commonest of these are Osteitis Fibrosa (Paget's Disease), Osteoma, and Myeloma (so-called Giant-celled Sarcoma). We have not discussed, as you have noticed, simple hypertrophies of the soft tissues; and further, there are other conditions which we cannot discuss in this short paper, which are fully described in the standard surgical text-books; more especially the text-books on Oral Surgery.

To refer to our first classification, a typical illustration of osteomyelitis of the floor of the maxillary sinus may occur, following the extraction of an upper tooth, where the infection is not limited. If necrosis occurs of the alveolar process it is due to the pressure of the exudate of the inflammatory reaction on the blood-vessels, and to the toxic bi-products of the bacteria. Large segments of bone may be lost, in fact the entire floor of the antrum,

including the alveolar process, may be lost. The clinical appearance of such may be visualized when you recall this area with the mucous membrane intact except for a number of small pouting areas through which pus may discharge, and through any of which you may pass a dull probe into a space above, likely the antrum. The patient may or may not be ill, but is likely running a temperature around 100, is fairly toxic and complains of pain in that area.

The treatment of such cases. First, general:—laxative, free administration of water, fluid diet, an anodyne, and if temperature is over 100, confined to bed. The local treatment consists of hot mouth irrigations every two hours, irrigations of the antrum, but preferably through the nose. No further teeth should be extracted until round-celled infiltration occurs, which would likely be after the fourth day; but in some cases where the infection is spreading rapidly,—but only where the life of a large area of bone is involved, — an emergency operation should be done and all necrotic bone removed, leaving the wound widely opened for drainage. You will note by this treatment that if the patient recovers, you will have a large opening from the mouth into the antrum, which permits fluids to pass from the mouth into the nose, and can only be closed by a large transference of soft tissue. We mention this form of treatment to condemn it, unless the patient's life is jeopardized, and would recommend in most cases that the dead bone be allowed to separate from the living bone; and when the separation is complete the small pieces will be forced out through the soft tissue. If patience is exerted by both invalid and clinician, an excellent result is usually obtained; but if curetting is permitted, a large more or less permanent opening will result. We strongly deprecate the so-called scraping of bone, as it seldom accomplishes

the desired result, and usually opens new avenues of infection.

In considering the second condition, where the opening through the tooth socket communicates with a cyst, we would suggest that in all these cases investigation should be most complete, including flat and stereoscopic X-Rays before operating. Cysts in this area may be as large as a hen's egg, almost obliterating the antrum, but not communicating with it. Generally speaking, if this cyst is of any size, it has existed for a considerable time, and if so is sterile; so when the tooth is extracted a yellow clear fluid will escape, or at the most a flacculent debris may escape. This is composed of colestrem crystals largely. The lining membrane where it is due to infection from the teeth, is firm, thick enough to remove in one piece, and lined by squamous epithelium. The interesting point about the origin of the squamous epithelium has never been satisfactorily explained; but if you will recall the fact that all teeth develop in a squamous-lined sac, it should not be a far cry to imagine that these cells might be easily stimulated owing to the inflammatory changes occurring previous to the origin of the cyst, and cause the development of the epithelial lining within this cyst. The growth of the cyst is easily explained on the grounds of the secreting power of any epithelial lining. We mentioned earlier that the lining might be of the columnar type; but in this article we would prefer to mention only that if the lining is columnar the cyst is not of the infective type or due to tooth origin, but is of the cell-rest type, so-called Odontomes. An Odontome, as you know, is a tumor which arises from predental tissue, and may spring from the enamel dentine or cementum organ, or may be a combination of all.

Treatment of these conditions consists in making a free opening above the apical area and beneath the antrum, removing its entire external wall,

and teasing the sac out by separating it gently from the underlying bone,—preferably in one piece. The floor of the cyst now should be carefully explored, and if any tooth roots project through the bone they should be removed. The roof of the cyst should now be considered, and if it opens through into the antrum the entire condition should be treated as a radical antrum, which will be described later. Where the roof is not perforated and where the flaps of the mucous membrane of the mouth can be utilized, they should be packed with iodoform gauze firmly against the denuded bony walls of the cyst, using 5 per cent. iodoform gauze. The after treatment consists in keeping the opening or mouth of the wound as large as possible until it has filled up from the bottom, which, as a rule takes six weeks to three months. Other methods are recommended, such as removing the outer wall of the cyst only, and stitching the inner wall to

the mucous membrane; but we have had little or no experience of this method, and do not approve of it, as potentially you still have your cyst in the jaw.

In our next section of this article we will discuss the care of an infected antrum where an opening occurs through the alveolar process.

30 Avenue Road,
Toronto.

Dr. Fuller states that the natural condition in a child is for the permanent teeth to force the "baby" molars out. In this way the mouth is never without the very necessary equipment for properly masticating the food. Incidentally, he points out that if the teeth are defective in a young child, there is an immediate tendency to bolt the food, a thing that is bound to bring other physical ills that prevent proper body development.

Western Canada Territorial Dental History

W. D. COWAN, D.D.S., REGINA.

Read Before the Saskatoon Dental Society, March, 1927.

The first meeting of Territorial Dentists was held in Regina, July 1st and 2nd, 1889. There were present at this meeting Dr. L. D. Keown of Moosomin, Dr. J. F. Guerin of Qu'Appelle and Dr. W. D. Cowan of Regina. The minutes of this meeting written in the handwriting of Dr. Guerin commence by saying, "In pursuance to a call issued by W. D. Cowan of Regina, a meeting of the Dentists of the Territories was held in the office of W. D. Cowan of Regina, July 1st, 1889. The special object of the meeting was to form a Dental Assn. and discuss other matters of interest to the Assn."

At that time there was no law governing Dentistry in the Territories. It is known that prior to this, Drs. Size and Haydon of Calgary, had petitioned the government for an act to regulate Dentistry, but nothing had been done in regard to it. At the time of the first meeting above mentioned, there were practising in the Territories: Drs. E. C. Holbrook, Calgary; Dr. P. F. Size, Calgary; Dr. D. R. Stove, Prince Albert; W. W. Wilson, Edmonton; R. H. Zimmerman, Pincher Creek; John Peterson, Grenfell; Dr. Walter Haydon, Cochrane; J. F. Guerin, Qu'Appelle; L. D. Keown, Moosomin; W. D. Cowan, Regina. In addition to these Dr. T. D. Shaw, Fort McLeod, was engaged jointly in ranching and Dentistry and subsequently it developed that Dr. R. C. McDonald was practising at Battleford, but his presence was then quite unknown to the others. Dr. Pugsley was also resident in Regina and engaged in a very limited way in practice. He had come West from St. John, N. B., in search of better health, and his stay was of

short duration. Dr. Callander of Toronto had taken up a homestead near Regina and while his horses rested he would occasionally insert a gold filling for a neighbor and better gold filling the writer has seldom seen. His usual charge was \$20.00 per filling. He had died before the above meeting was held, as had also Dr. Keown of Regina, a former partner of Dr. Size, and brother of Dr. L. D. Keown of Moosomin. This then covers the whole list of dentists who had been or were practising in the Territories at the date of the first meeting. Prior to this meeting, considerable correspondence had been carried on, and it was generally agreed that a bill should be drafted to submit to the Assembly as well as form an Assn. Some of the men mentioned above were not college graduates, and they took the ground as one of them said in a letter that "If the Bill stopped those practising who are already here even though they were not graduates, it would not hold water." By correspondence it was pretty well agreed that the Bill "Would recognize all those who were then in practice, even if they were not graduates, provided they would present a united front in calling for an act that would require all to be graduates who registered hereafter." This then was the basis of the first attempt to get legislation, and acting upon that tacit understanding and in order to get something concrete to lay before the meeting, Dr. Cowan approached Mr. John Secord, M.L.A. for Regina, and asked him to draft a bill for submission to the meeting. This Mr. Secord did and later on, after the first Dental Assn. had been form-

ed, gave the Assn. valuable assistance. As we look back a little bit of humor is found surrounding all these proceedings. One incident might here be mentioned. Prior to the drafting of the Bill, Dr. Cowan had inserted upper and lower dentures for a near relative of Mr. Secord. For drafting the bill Mr. Secord would be entitled to his fee. Dr. Cowan asked him what his fee was. "Oh the price of an upper and lower." The accounts were balanced, and thus was paid the drafting of the first Territorial Dental Ordinance. The first Dental Act was passed on November 22nd, 1889. It did not in any respect meet the wishes of the dentists. It provided for an enrollment fee of \$25.00 for graduates who thereafter applied, and a \$5.00 fee for students articulated in the Territories. All of the fees were payable into the provincial treasury. The government received and passed upon all applications, and no Dental advice was provided for. The newly created Dental Assn. immediately wanted to know who was going to enforce the law. They held that if the government was going to collect all fees that they should provide the necessary machinery for enforcing the law. The government, however, insisted that it was the duty of the Dentists to see that the Dental Ordinance was enforced, and for years the few dentists in the Territories had to "dig" into their pockets with alarming frequency to get the means whereby respect for the law should be maintained. A fee of two dollars was levied upon each member of the Assn. and four years later, to meet the heavy drain upon the individual members for enforcement, the following resolution was passed, "That all expenses be paid *As far as possible* out of the funds of the Assn." The possible has never yet arrived so that it still stands that for the first five years of the existence of the Assn. the officers thereof footed all bills. It might be mentioned here that the officers elected at that first meeting

were: Dr. W. D. Cowan, President; Dr. L. D. Keown, vice-President; Dr. J. F. Guerin, Secretary; Dr. P. F. Size, Registrar; Dr. C. F. Stovel, Treasurer, and while there was subsequently some shifting of officers, yet these men really continued to administer the affairs of the association until some years later they were summarily dismissed from office by act of the Legislative Assembly solemnly passed very much to the regret of the government when subsequently the government found out to their surprise and chagrin, that the Dental Assn. officers were right. From the very beginning the dentists took the ground that a Dental Law was or should be passed for the protection of the public, and not for the protection of the dentists; that a certain standard of qualification was necessary and that this standard should be maintained in the interests of the patients; that the dentists as an honorable body, should be willing to enforce that law in the interests solely of the people the law was supposed to protect; that the government should be willing to treat with the Dental Assn. as an honorable body and rely upon them until they had proved themselves unreliable; that the sons of our own territory should be given an opportunity equal with others to study dentistry, and that they should not be compelled to go to a foreign country to secure their education when we have in Canada institutions fully capable of educating them.

But it was not long before a very keen fight developed. The Territorial assembly was composed almost entirely of men from rural districts and all looked upon laws governing any of the professions as just so much protection given to them to permit of exploiting the public. Hence they were opposed. The idea of the dentists having a law to protect them. It was absurd. So absurd indeed that once when the Dental Assn. asked for certain amendments the then member for

Red Deer brought in a Bill as a spicy piece of sarcasm incorporating the order of Claw Hammer (Carpenters) and providing "protection" for them so that they would not hit their thumb with the hammer. The fight in the Territories as elsewhere was to get the rural population to see that the regulation of the practice of dentistry was primarily in their interests, the only difference being that the fight here was probably more spectacular and vigorous than in most other provinces. Day after day; session after session it was insisted that the dentists were already running a "Close Corporation" and having already tasted blood were hungry for more. This in spite of the fact that in a printed circular letter issued on April 3rd, 1900, four years before the project of a Dominion Dental Council was launched, Dr. Cowan, president of two territories Assn., said: "The reciprocity clause of the Dental ordinance seems to have awakened an interest in the matter of interchange of licenses on Dominion registration, and I have every hope that shortly this Dominion of ours will be dentally a united country." Interchange of licenses on Dominion registration is a perfect antithesis to a close corporation, and yet while we were fighting for the all-Canadian standard with a right to all qualified Canadians to come to the Territories without hindrance, we were accused of trying to keep them out and run a close corporation. As the above quotations will show, the Territorial dentists were interesting themselves in the Dominion Dental Council and Dominion registration long before that Council came into existence, in fact as far as the writer knows, this is the first official document submitted to any association on the subject.

The first Territorial Dental Ordinance was passed so as to come into effect six months after, that is to say on May 22, 1890. It will be noticed in the Registrar that the first eleven

names are recorded as being qualified by reason of "Residences in Territories prior to ordinance." This was done by agreement. Those who were not graduates felt that it would show a discrimination if they had to publicly admit that they were not graduates as it was agreed by all that none would register their college. In that way a perfect working harmony was established amongst the members, and this and several other things of a kindred nature are responsible for the harmony and good will that enabled the dentists to work together even though they were business competitors. On the 22nd of May, the last day for registration, six of the eleven had not paid their fees to the government, but they were all paid nevertheless, and thus on that day we started out, everyone of us in good standing.

On July 1st, 1890, the first certificates of membership in the North West Territories of Canada Dental Association were issued to all those who had up to that date registered. It was first decided to call our organization the North West Territories Dental Society, and certificates were issued in that name, but after getting the whole lot printed and signed we decided that the term Association was more dignified and important and consequently the change was made. We started off with big ideas and we are still going.

All of these certificates were signed by Cowan, Keown, Guerin, Stovel, Size and in the order named. Each one subscribed the letters L.D.S. after his name. All those who held the D.D.S. dropped it so that none could exalt himself above the others.

The law as it stood was not satisfactory to the dentists. It provided for students under the preceptorship system (then just about on its last legs in Ontario) but made no provision for examining them. The government issued licenses and the Dental Association knew not who they were

licensing. It collected the fees and left the Assn. to foot the bills, so a continuous pressure was kept up to get amendments. In 1892 an amendment was made whereby a Board of Examiners was created, and it was necessary to get the approval of the chairman of the Board before a license could be issued. Articles of apprenticeship had to accompany an application from a foreigner for a license. Fifty dollars was now fixed as the registration fee, ten of which went to the government and forty to the association. Matriculation in some Canadian Dental or Medical college was now required from our Territorial students. That means matriculation with Latin. New trouble started to brew. From the beginning the Territorial dentists took the ground that Canadian Institutions should be favored if there were to be any favors at all. At that time there were many so called Dental Colleges in the United States which did not know what Latin or matriculation meant. At that time the American Colleges were not under the control they now are, and at that time the leading American dentists were striving to get a higher matriculating standard so that the Territorialists were really fighting the same fight that the best Americans were. We were requiring junior matriculation with Latin from our own students, and we insisted that outsiders have the same. We insisted that foreign graduates come up to the standard we had fixed for ourselves. On this ground the chairman of the Board of Examiners refused many applications. One of those might be cited as an instance. A Dr. McAfee from High River, wrote the chairman applying for a license. Refused. Mr. Lincham, then member of the Assembly for High River, took up his case and applied all the pressure he could, but he did not succeed. Finally he came to the Assembly in wrath for he, even he, a member of the Assembly had been turned down by this Dental

Chairman. Why this chairman was even requiring matriculation and a knowledge of Latin from this perfectly good American graduate. Here he (Dr. McAfee) was a fully qualified Doctor of Dental Surgery with a degree conferred upon him by an American Dental College, and yet he wouldn't be allowed to practise. Unfortunately for Mr. Lincham, Dr. McAfee had written to the chairman, and the chairman still held the letter and effectually used it. It was on a printed letter head. J. W. McAfee, D.D.S. (Doctor of Dental Surgery) and it started thus: "Mi Dear Docktor." He couldn't even spell the title that had been conferred upon him. Almost grotesque; even the rural members laughed at Lincham. And there is nothing will kill a public man quicker than ridicule. It helped the Dental Assn., for the people began to see that there was at least an element of right in their contention. When this letter was handed Premier Haultain as an evidence of the high standard of education in some of the United States colleges, he looked at it, read it, and handed it back without a word of comment. But I still see the expression on his face. It talked louder than his eloquent tongue could. Thereafter we had no opposition from Premier Haultain on the matriculation point.

Another of the strong objections taken by the rural members was to the Latin requirements: "Why should a dentist need Latin to pull teeth?" "Pulling teeth" was the one idea they had of dentistry. As an answer to this assertion, the usual argument was "Anatomy is largely written in Latin terms, and surely a knowledge of anatomy is necessary. A knowledge of Latin enables a student much more easily to study Anatomy. Why! take the name of the smallest muscle in the body—levator labi, superius alequanasi. The very name tells you where it is located, and what its functions are." The rurals were not able to

surmount this, and usually at that point quit.

On one other occasion Premier Haultain was rudely shocked. A certain dentist had been refused registration by the chairman of the Board of Dental Examiners. Thereupon he started in to make all the fuss he could, and did secure an amendment to the Dental Act, and under it registered. Shortly after he and Premier Haultain met and the latter asked the former how he liked the amended Dental Act. The dentist promptly replied: "It is not as good an act as it was before you amended it. I think you ought to repeal the amendment." "Why," said Mr. Haultain, "I thought you said the old act was unjust." "Oh so it was, but I am registered now."

That dentist charged an M. L. A. \$165 for inserting nine Petroid fillings in his daughter's teeth. He appealed to me, "Is that a reasonable charge?" "It sure is," was my reply, "for members of the assembly who like that kind of a dentist."

From the date when the first dental law was passed until 1904, there was constant friction between the Association and the Government, with the exception of two years, 1900 and 1901. In 1900 the Legislature had agreed to certain changes, and there had been a lull in application for private bills, and our association was permitted to properly apply the law. At the annual meeting held that year the President's address was submitted. It read as follows:

To the Members of the North-West Territories' Dental Association.
Gentlemen,—

The year just closed has been the most satisfactory one in the history of our Association.

The Dental Law was amended shortly after our last session, and its operations have been so beneficial that the North-West Government, the people and this Association have each full reason for congratulating themselves. Under this law the tramping through

the country of irresponsible dentists has been practically stopped, and to day, for the first time in our history, we can say we have a resident and proficient profession. It is my belief that to-day the profession in the North-West will compare favorably with the profession in any province in Canada.

It is with regret that I have learned that in one or two instances a member of our Territorial Association has violated the law of a sister province. We compel those of other provinces to respect our law, and it is but right that we should respect theirs. I would ask your attention to this matter that you may devise means to discipline those guilty in this way.

There is to be a Dental Convention in Winnipeg, in July, to which, I understand, Territorialists are to be invited. I hope you will take steps to secure as full a representation as possible.

The law in relation to students is working well. I have personally advised all our students that a thorough course will be demanded of them. This, chiefly in their own interest. The matter of a college which they are to attend is, to a certain extent, an open question. If, however, a student attends an American college he is thereby debarred from practising in the greater part of Canada, and to attend the Canadian college insures a broad field for the student's future. As the Canadian college is undeniably one of the best on earth, I would suggest that you recommend to all students the advisability of attending the R. C. D. S.

During the year I have asked to have the North-West second class certificate, with Latin option, accepted by the R. C. D. S. for matriculation, without the necessity of a university matriculation. Owing to the North-West Territories having a higher school standard than Ontario, this could be accepted by the R. C. D. S. without lowering their standard. But up to

the present there has been no affirmative response.

The reciprocity clause of the Dental Ordinance seems to have awakened an interest in the matter of provincial interchange of licenses, or Dominion registration, and I have every hope that shortly this Dominion of ours will be, dentally, a united country.

The time of meeting of the Association ought to be changed so as to permit of our meeting immediately after the close of the college term. This will permit of our students coming direct to our Board of Examiners without delay to them or expense to us. While a thorough course should be demanded of our students, no petty obstacles should be put in their way, or unnecessary cost or loss of time be forced upon them.

We require a new by-law covering the admission to or expulsion from our Association of men guilty of immoral conduct. Recent happenings, wherein men rejected elsewhere for immorality have applied to us, make this imperative. Our by-laws at present are not sufficiently explicit on this matter.

It is with pleasure that I notice an increasing good will amongst the dentists of the Territories toward each other. While competition here is as keen as elsewhere, there is none of that insane jealousy which is so disgracing our fellow dentists in other provinces.

During the year there have been hundreds of enquiries from all corners of America as the openings in the Territories. These letters and the answers thereto are submitted for your perusal.

The law has been enforced during the year with vigor and impartiality, until, now, a very wholesome respect is felt for it. I would suggest, however, that special arrangements be made to meet certain conditions in Northern Alberta.

The work being done by the Dominion Dental Journal in elevating

our profession and bringing dentists from all parts of Canada into harmony, is worthy of your attention.

Trusting that the incoming year will be as satisfactory as the last, I remain,

Yours respectfully,

W. D. Cowan.

Regina, April 3rd, 1900.

This will give you a pretty clear idea of the policy our Assn. was then pursuing. You will notice it says "The law in relation to students is working well". What was required of them? The minutes show that every student had to have a second class non-professional school certificate issued under the N. W. T. school ordinance, serve 2½ years and attend one course of lectures in some Canadian Dental or Medical school, and then pass an examination in chemistry, anatomy, prosthetic, dentistry, histology, oral surgery, physiology, operative dentistry, materia medica therapeutics, metallurgy, pathology, mechanical dentistry and orthodontia and crown and bridge work. The examiners numbered three, so they were either very capable men or had lots to do. The preceptorship system was adopted and applied because it was then the accepted system almost everywhere, and because Premier Haultain insisted that we had no right to compel a student to go outside of the Territories to get his education. Towards the end of 1901 the worst trouble of all started. The Dental Assn. considered applications for private bills as bad and fought them all, but constant charges in the law were made to suit each applicant. The interpretation which the government placed upon their own law they considered even worse, but when they amended the law by striking out the penalty clause, thus, leaving us in the position where we were required to compel every dentist to register, but no penalty provided if they didn't, well it just broke our heart. Then, too, they had enacted that the graduate of every British or Canadian

College should pay a registration fee of \$25.00, while American or other foreign graduates should only pay \$10.00.

In the winter of 1902 we found a number of our students coming up for examination. As per their articles of agreement they had attended the R. C. D. S. and would leave Toronto early in May and would as we had taken the ground that every possible assistance should be given to our own students, and no unnecessary obstacles permitted, it was deemed advisable that the date of the Territorial examination should be fixed for May, and on such a date as these students could attend. That would bring our Board of Examiners to Regina in May, and the Territorial Law fixed April as the date of our annual meeting. As the Examiners were needed and usually attended our annual meeting, it meant two trips to Regina within a month. We deemed this a needless expense, but we were faced with the law on one side and necessity on the other. What were we to do? We decided on a course which broke the storm. We agreed to and did call the annual meeting on legal date this time in Moose Jaw, but we also agreed amongst ourselves that only enough of us would go to Moose Jaw to form a quorum, and then pass a resolution to adjourn to a later date. The minutes of that meeting read as follows.

MOOSE JAW, N. W. T.

The annual meeting held April 1st. 1902.

Meeting called to order. President in the chair. Secretary gave notice that all members not in default for dues had been notified.

Moved by Dr. Ross, seconded by Dr. Size, that the meeting do now adjourn to meet in Regina on the same date as the students' examinations are to be held, and that all dentists in the Territories be notified of date and place of meeting as soon as arrangements can be made with students as to date

and if necessary to get a representative meeting.

That all expenses be paid as far as possible out of funds of the Association. We adjourned. The Assembly was in session. We had asked for a new dental law. We had refused quite a number of applicants for registration. All those whom we had refused were naturally sore at the officers of the Dental Assn. In fact, some of them were bitter, but they were registered and under the law had a right to attend the annual meeting and elect officers. Immediately they seized upon our "Secret" meeting. Enlarged it into a meeting in which we officers had again elected ourselves to office. "Give us a chance to vote by mail, and we will show these fellows how long they will hold office." This was the plea we subsequently found which they put up to the government. The government did not consult us on the matter at all, but the circumstances looked bad to them. Without a knowledge of our motive they were bad. Instead of the new dental law which we were expecting, we got a shock. It came like a bolt from the blue, and out of the last day of the session. The government introduced a bill dismissing the officers of the Dental Association for misconduct, and ordering us to report at the Council Chamber of the town hall, Regina, with all books and names on Friday, June 20th, 1902, at 10 a.m., and it was then provided that a new election of officers should be held under the auspices of the government and with John A. Reid—then an official of the government, later financial agent for many years for Alberta in London, England—as returning officer; the election was to be by registered ballot directed to Mr. Reid, and all persons who had been registered whether they resided in the Territories or not, had a right to vote. Printed ballots were sent out to all with a known address and later on were voted from many parts of the States and eastern Canada. Then com-

menced a real election. - The government and all rejected applicants on one side and the officers of the Assn. on the other. When the day for meeting arrived the press found the officers had invited them to have a reporter there. They also reminded the government of the event lest they overlook it, and asked them to be sure and send a representative. The president was in the chair. The Regina Standard reporting in next issue said:

TERRITORIAL TOOTH-PULLERS

Special meeting of the North-West Territories' Dental Assn.—Dr. Cowan reviews dental legislation and makes startling exposures.

The Territorial Dental Association met at Regina Friday, June 20th, by order of the Legislative Assembly. Dr. Cowan, President, in the chair. 10 o'clock a.m.

The attendance was not as large as was expected. The meeting was held in conformity with clause 2 of the Dental Ordinance of last session. This ordinance practically disorganized the association and named the place, day and hour when reorganization should take place.

PRESIDENT'S REPORT

The following report was submitted: To the Members of the North-West Territories' Dental Association.

Gentlemen—The year just closed has been marked by an influx of dentists, many holding very doubtful qualifications. Some of the applicants have been refused registration, but in every instance the government has subsequently ordered their registration. The complaints from all portions of the country, from medical men and other citizens, as to the character of the operations performed by some of these men, have forced me to the conclusion that a vast amount of malpractice is being engaged in. We, as a Board, must refuse to accept responsibility for this.

The movement inaugurated some time ago to establish a Dominion standard of qualification has culminated in the calling of a Dominion convention to be held in Montreal next September. We are invited to send a representative, and I suggest that you do so. Further, I would suggest that you instruct him to support a standard of qualification not lower than that which obtains with the Royal College. The formation of a Dominion Association is also proposed. To this I hope you will lend every assistance.

A fund for the erection of a memorial to the late Dr. W. Geo. Beers is now being gathered. As an association, and individually, we should all contribute to this.

About one month from now the last of the Territorial students will come up for examination. These are the students who articulated prior to the strange and unaccountable interpretation placed upon the law by the Territorial Government. There cannot, therefore, now be any more students graduated for four years to come, and there will be none until the law is altered. The reason for this are that (a) our law requires a second class certificate from our own students and admits outsiders who are so illiterate that they cannot write their own names; (b) it requires 3½ years' term of study from young men in the Territories who wish to study dentistry, and admits foreigners who have only studied three months. This discrimination against the young men of the Territories is most censurable and reflects disgrace upon the government that has brought it into existence.

The whole Territorial Dental Law (as interpreted by the government) is a positive discrimination against Canadian and British institutions, and ought to be wiped out if the government will not consent to properly amend it.

- (To Be Continued)

SOCIETIES

Graduating Dinner, McGill University

In strong contrast with the days not so long ago when the dentist did little else but pull teeth, graduating members of the Dental Faculty of McGill University were urged last night to reduce teeth-pulling to its lowest minimum. This plea came from Dr. A. L. Walsh, superintendent of the dental clinic of the Montreal General Hospital, who addressed those attending the Dental Undergraduate Society annual dinner held at the Mount Royal Hotel.

The speaker reminded the future members of the profession that the present-day conception of the dentist is that of a conserver of teeth. Tooth preservation is well within the possibilities of the dental science of today, he said, strenuously opposing extraction unless all possible hope of saving the tooth is gone. In speaking of the rapid advances that the profession has made within recent years, the speaker declared that it is now perfectly possible to provide those who have already lost teeth with efficient masticatory facilities.

Dr. Walsh told the graduating students the necessity of research work in the profession, which he frankly admitted was still in an evolutionary stage. He suggested as a field of research, concentration on investigation of the cause of tooth decay. "It is up to us to find the cause of this and combat it," he declared.

Quebec is numerically surprisingly poor in dentists, the speaker pointed out, in making comparison with Ontario. Toronto has more dentists than the whole of this province, he said, quoting the figures for Quebec as 700, and those for Ontario as 2,000. There is one dentist in Que-

bec to every 4,500 inhabitants, he declared.

Dean A. W. Thornton delivered a brief address, full of encouraging statements for the future of the profession. He made a plea for dentists to be more than the bare name implies, and he advised the graduates to cultivate a love for the beautiful in nature and in literature. To raise the profession to a higher scale, he suggested culture, "Let us make provision for the time when we will be more than dentists and will make ourselves more acceptable to those about us," he said.

The dean of the faculty presaged changes in the curriculum in the future. "I plan to teach men not only dentistry, but that they may see that which they have not yet seen, and make better men and dentists in order to permit them to play a greater part in the life of the country," he concluded.

Lt.-Col. Wilfred Bovey of McGill University, in the absence of Sir Arthur Currie, made an address which was broadcast by Station CFCF, as was music by dental students, led by Jeff Simpson. Colonel Bovey traced briefly the growth of McGill University and pointed to its brilliant place among the universities of the Empire. In point of age, he reminded his hearers, that McGill was one of the oldest of the "modern" universities. London University, now the largest in the Empire, was opened in 1828, he said.

J. R. Carson presided and the other speakers were the following: K. Beaton, W. H. Walker, R. E. Dagg, A. R. Winn, Roger McMahon, Dr. J. S. Dohan, A. C. Voisard and Claude Sutton of the University of Montreal.

Prof. Gies Honoured

A testimonial dinner was tendered to Prof. W. J. Gies by the New York Academy of Dentistry with first, second and ninth district societies of New York State on Tuesday evening, April twenty-seventh, 1927, at the Plaza Hotel, New York.

The menu card contained a splendid picture of Dr. Gies and a short outline of his achievements.

Dr. Bissel B. Palmer, president of the Academy of Dentistry, New York, introduced the Toastmaster, Dr. Henry W. Gillett. Owing to another banquet given in honor of the president of Columbia University, Henry S. Prichard, President of the Carnegie foundation, was not present. Dr. Banzhaf, President of the American Dental Association was the first speaker. He said he brought greetings from 38,000 dentists of the United States to Dr. Gies. He said that the first real study of dental education was begun in Milwaukee. At that meeting the Dental examiners, American Dental Association and the faculties association were represented. A classification of Dental Schools was made which scored the College, pleased the examiners and satisfied the American Association. He believed the Dental Educational Council had three functions to perform and while ever they adhered to these they would never be in error. 1st, supply the country with a sufficient number of qualified dentists. 2nd, encourage dental research. 3rd, maintain dentistry as a separate profession.

He thought the Medico-Dental relations were not satisfactory at the present time and that some day the public would demand better relations. Soon, he thought, both state and private aid would be directed towards dentistry. During quite re-

cent years medicine had received \$145,000,000 as against two philanthropies, Forsyth and Eastman in Dentistry. Dr. Banzhaf closed with a brilliant eulogy of the guest of the evening.

At this time a few telegrams and letters from friends were read from a sheaf of such correspondence. Dean Friesell and the first District Society, each presented Mrs. Gies with a bouquet of flowers. Mrs. Gies' response was as brilliant as that of her brilliant husband at a later period.

Dr. Kipple, a twenty year colleague and professional friend, expressed his gladness to have an opportunity to express his faith in a man, who had made a most serious study of dental education in the United States and Canada.

Mr. Newcombe Carlton, a trustee of Columbia University, said that Dr. Gies had written the Magna Charta of dental education and that Columbia was pleased to have had a share in the undertaking by loaning Prof. Gies to the Carnegie foundation for the purpose of making a study of Dental education.

Prof. Gies was received with wonderful goodwill and applause. He thanked all those who had spoken so kindly of his efforts, in fact he thought many of the statements were extravagant but nevertheless goodnatured and pleasing. Now from a point of introspection in dentistry there should be a period of looking forward for improvement. The Carnegie foundation took a great risk in choosing him. What was their risk was his honour and he hoped that the report of his work would not be a book to put on the shelf as a reference but one to be studied and reflected upon as one presenting the truth in detail and in imagination.

The Dominion Government Makes a Grant of Five Thousand Dollars, and the Red Cross Two Thousand Five Hundred Dollars to the Canadian Dental Hygiene Council.

The service rendered to Canada and its citizens by the Canadian Dental Hygiene Council during the last few years, has at last been officially recognized by the Dominion Government through the granting of Five Thousand Dollars (\$5,000.00) to assist this organization in further promoting the work of Preventive Dentistry and Mouth Hygiene. This amount was placed in the Supplementary Estimates by the Minister of Health, and after approval by the Cabinet Council was passed by the House of Parliament just before the session ended. The grant is the culmination of three years' effort by the Executive of the Council to secure support and recognition from the Government. A request for Ten Thousand Dollars was first made in 1924, and renewed each year without result, and although some disappointment is felt that only half the amount asked for was given this year, still the Executive are greatly encouraged and grateful for this addition to their funds. An interesting fact in connection with this grant is that as far as we know, it is the first time on record that the Federal Government has given monetary assistance to an organization for the specific purpose of promoting dental health education.

In coming to their decision, the Government were no doubt influenced by the knowledge that only a few months ago the Canadian Red Cross had approved the work of the Council by making a contribution of

Two Thousand Five Hundred Dollars (\$2,500.00). This endorsement by such an important body as the Canadian Red Cross demonstrates convincingly their interest in Preventive Dentistry, so much so, in fact, that the service which the Council is carrying on for the people of Canada is very much in line with the peace time programme of the Red Cross.

At the beginning of 1927, the Executive of the Canadian Dental Hygiene Council drew up a plan of activities as follows:

PROGRAMME OF ACTIVITIES

To provide official headquarters as a clearing house for all Oral Hygiene work.

To provide a library of books and pamphlets on Oral Hygiene, these to be sold or loaned.

To provide a catalogue of Lantern Slides, moving picture films,—slides and films to be rented.

To provide outline lectures, charts, mottoes, cards and pamphlets for the promotion of Oral Hygiene work.

To arrange, if possible, to have an official representative of the Canadian Dental Hygiene Council, at the annual meeting of each Provincial Society, to present a report of the progress of the Canadian Dental Council.

To co-operate with all recognized Provincial Health Organizations and, if possible, to assist them with the services of our Field Officer.

To endeavour to have established a properly organized Dental Division in the Department of Health of every Province of the Dominion.

To arrange a broadcast of Dental Health material throughout the Dominion.

To syndicate Mouth Health material to the press.

To provide special Mouth Health educational material for Normal School Students, Nurses in Training, etc.

To organize Dental Health Service to immigrants, through Health Departments and other organizations.

To enlist the interest and support of Societies or Organizations such as School Trustees, Medical Health Officers, and Women's Institutes, in Preventive Dental Work.

To have an official representative of the Canadian Dental Hygiene Council available to attend the general meetings of all National organizations doing health work.

It was estimated that to carry all these plans into effect would require a budget of Ten Thousand Dollars. This exclusive of the salary of the Field Officer, which is provided by the Canadian Oral Prophylactic Association. The problem of raising this money has been greatly facilitated by the grants from the Red Cross, and the Dominion Government. These together provide Seven Thousand Five Hundred Dollars. The remaining Two Thousand Five Hundred Dollars, we hope to obtain from Dentists, Dental Societies and other organizations and individuals.

It is hoped that some time in the near future, a plan may be worked out of providing dental education and care in sparsely settled parts of the Country, remote from any centre where they can secure the services of a Dentist. The people in these unorganized districts are badly in need of such service, many of them are newcomers to Canada and have not had any of the advantages of

the educational work already done in organized communities. Some such plan might possibly be worked out in co-operation with the Red Cross, who have already established many Outpost Hospitals and Health Centres in these areas. Thus the Health Service at present given might be rounded out by providing some form of Dental Treatment as well as education on Mouth Health and the prevention of Dental Disease, carried on through the Oral Hygiene Committees of the various Provinces. This work would be capable of accomplishing great good.

To provide incoming new Canadians with a knowledge of the importance of Oral Health, and if possible, to give some practical assistance along these lines, is a plan that has been given a great deal of consideration, the difficulty has been to find a practicable way of carrying this plan into operation. Once again the Red Cross offers an opportunity through their Port Nurseries and it is hoped that some feasible method will soon be worked out to enable the Canadian Dental Hygiene Council to put into effect this very humanitarian effort, which will be productive of far reaching beneficial results.

Central Headquarters have been established at 86 Bloor Street West, Toronto, and the Staff organized. Educational material has been collected, and this is being added to. General organization work is being carried on, and plans are maturing for a Canada-wide Program of Oral Health activities, under the auspices of the Oral Hygiene Committees of the various Provinces. Suggestions for the extension of the Program of the Council are invited from Oral Hygiene Committees, Health organizations, and Health workers, so that the Council may broaden its activities to accomplish the greatest good to the greatest number.

Saskatoon Dental Society

Presenting a full survey of the history of the dentists from before the time of the institution of the province, Dr. W. D. Cowan, former mayor of Regina, and one of the pioneers of Western Canada, speaking before a meeting of the Saskatoon Dental Society, in the King George Hotel last night, gave an insight into the history of the profession in pioneer days.

Dr. W. Winthrop, Saskatoon, in proposing a toast to Dr. Cowan, said, "As Bell is to the telephone, as Marconi is to the wireless, as Pasteur is to medicine, so is Cowan to dentistry." Dr. Winthrop also spoke of Dr. Cowan's work while member for Regina in the Borden government and also as mayor of Regina.

Dr. Cowan, whose address was presented at the request of Prof. A. S. Morton, historian at the University of

Saskatoon, dealt with the formation of the first society in the North West Territories.

The speaker explained the various difficulties which were confronted in the securing of proper legislation to prevent the preying upon the public by quack dentists. He criticized the government of the North West Territories for some of the legislation passed at that time.

Dr. Cowan also told the gathering of a few amusing incidents which took place during the early days of the dental society, merely by act of the assembly and not by their qualifications.

Dr. Cowan will address the historical society at the university on the early political history of the North West Territories.

International Association of Dental Research

The Fifth Annual Meeting of the International Association of Dental Research was held in the Hotel Plaza, New York, April 19th, 1927, Dr. Leuman M. Waugh in the chair.

The minutes were taken as read.

Dr. Gies, as godfather of the Association was asked to discuss "The Future Development of the Association". Dr. Gies said that no one had really taken hold of it. The various sections were less active than they might be. In view of the whole situation, he suggested that the President should appoint a committee of three, one of whom should be the secretary to co-ordinate the business of the organization for one year.

It was moved by Dr. Gies and seconded by Dr. Jackson that the Presi-

dent appoint a committee of three, of which he would be one and one other be the secretary, to conduct the affairs of the Association for one year. Carried.

Dr. McDonagh suggested the study club idea to promote interest in the local sections.

Dr. Rice pointed out that the Research Journal was needed to centralize the efforts of the Organization.

Dr. Hyatt said that heretofore the central organization had not even suggested any definite form of research. He thought the study of the immune areas of the teeth would be of great value.

Dr. Harold K. Box, Toronto, was elected a member of the Association.

Officers were elected as follows

Hon. President—W. J. Gies.

President—Leroy M. S. Miner.

Treasurer—Dean Rice.

Secretary—A. E. Webster.

Under the resolution just passed, the chair appointed Dr. W. J. Gies, Dr. Leroy, M. S. Miner and the Secretary,

who was elected on condition he would resign to give place to the secretary appointed under the conditions of the resolution, the Secretary pro tem resigned.

A. E. Webster,
Secretary Pro tem.

Swelling of the Hard Palate

Dear Dr. Webster:

I have an unusual case and would appreciate very much your advice.

A gentleman, twenty-five years old, presented himself with a huge swelling on his palate. It extended down practically level with his teeth. A physician had been treating him and lanced it on two occasions with little success. He had four badly broken down upper incisors, which I removed under nitrous oxide. The swelling decreased rapidly in size for one week, but during the last week has remained the same size. Patient complains of a cracking sound when he puts pressure upon the area with his finger. The present swelling is about one-third of its previous size. I excluded the thought of tumor from the information that the swelling had taken place rapidly during a day or two. Unfortunately I did not see the patient at the beginning of the treatment.

Thanking you in advance for your opinion, I remain, Yours sincerely,

Dear Doctor,—Such swellings as you describe are usually inflammatory and are caused from the upper lateral root which penetrates the suture between the maxillary bone and the premaxillary bone and follows backward to the junction of the premaxillary bone of the opposite side where swelling takes place. The periostum and the hard tissues covering the bone are hewed off the bone and as you say are on a level with the occlusal edges of

the teeth. This tissue is so dense and thick that when opened with a lancet no pus comes through because the edges come back tightly together. You should open through the lateral socket and the hard tissue of the palate and wash water through. The incision on the palate will have to be kept open by packing. The crackling may be due to a gas organism or air may have entered between the palatal bone and the periostum. Occasionally a similar condition occurs from the lingual root of the upper first molar.

The Child Welfare Association of Montreal is giving general instruction in the value of good teeth. Teeth are not a necessary evil but as a highly important factor in the bodily structure, demanding proper care if general health is to be maintained, is the lesson which is being expounded to mothers of young children and to pre-natal conferences under the health teaching programme of the Child Welfare Association. Group teaching along these lines is drawing good attendance at some eight centres of the association, where regular lectures on how to ensure dental health are given by Dr. E. Thorburn, Cleveland.

Dr. Quinn's dental office at Abbotsford, Sask., was destroyed by fire April 4th, 1927.

Academy of Dentistry, Toronto

Dear Doctor:

The fifth stated meeting of the Academy of Dentistry, Toronto, will be held at 240 College St., on Monday, January 24th, 1927, at 8 p.m. sharp. A group of most helpful and practical clinics will be presented, as follows:

Full Dentures, Dr. J. A. Bothwell.

Gold Crowns, Dr. R. S. Woolatt.

Indirect Inlays, Dr. A. S. Thomson.

X-Ray Interpretation, Dr. R. M. Box.

Exodontia, Dr. B. R. Gardiner.

Enclosed you will find a list of the members of the Academy for this season by districts, a list of the offices, and one of the officers for this year, together with a nomination paper.

Please notice the change in the constitution passed at the last meeting allowing you to nominate one member for each of the offices

of President-elect, Secretary, and Treasurer, and one Councillor for your district. You will find your district by consulting the accompanying list of members. Be sure to nominate a Councillor for your own district.

All nomination papers must be signed and reach the Secretary, at 86 West Bloor St., by February 10th, 1927.

At the meeting on January 24th the following change in the Constitution will be voted on:

Act 1X., Sec. 2. "One Councillor shall be nominated and elected by and from the Fellows practising in each of the Four Districts," change to read "in each of the Five Districts."

Yours Fraternally,

S. STUART CROUCH,

Secretary,

Academy of Dentistry, Toronto.

Red Cross Activities

Soon after the war the Red Cross, finding nowhere in Canada provision made for an adequate course in Public Health Nursing, arranged conferences with their Provincial Divisions, with University authorities, and health officials, with the result that today many Canadian Universities now provide such courses. Through several Red Cross scholarships to the value of \$350.00 each, further provision has been made for such nurses as may be unable to finance this course and who wish to take it.

The Red Cross too has financed for certain periods, in every province in Canada, the employment of Public Health Nurses, in the hope that the

people served might be taught their value and would later bear the costs of this invaluable community service. This hope has been already realized in many places.

In the past six years the Red Cross has distributed 5,873,745 pieces of health literature, all prepared under the most expert advice.

In the past six years the Red Cross has established thirty-nine Outpost Hospitals and Nursing Stations in our hinterlands in Northern Ontario, Manitoba, Saskatchewan, Alberta and New Brunswick. This was done after it had been brought to their attention that neither the districts concerned nor the provinces of which they were

a part could afford to supply these services in outlying, unorganized, pioneering sections where they were so urgently needed. Last year 541 mothers in such districts, who must otherwise have gone without either medical or nursing care bore their babies in the Outposts under trained assistants and not a life was lost. Altogether last year 2,138 patients spent 24,404 hospital days under the Red Cross flag in the Outposts and only those who read the daily records of these life-saving stations can understand just what they mean to new settlers in new lands as places of succor when disease strikes or accident befalls, and as a general health measure. The districts served by an Outpost frequently extend to a radius of sixty to one hundred miles and the work of the nurse in charge is limited only by the needs in the community in which she is placed.

The Outpost Hospital as we have it in Canada is the first of its kind in the world and Dr. F. W. Routley, Director of the Ontario Division of the Red Cross, has stated since his recent return from the Headquarters of the League of Red Cross Societies in Paris that other countries have been so impressed with the value of such a service that already Australia, Poland, Sweden, Norway and Germany are following in the path of the Canadian Red Cross in the establishment of Nursing Outpost Stations.

Another unique contribution of the Red Cross is the humanitarian service now supplied in the Seaport Nurseries in Saint John, Quebec and Halifax. Here the Red Cross co-operated with the Immigration and Health authorities to welcome, refresh and speed on their way the mothers and children among incoming immigrants. A friendly follow-up health card is filled in at the Nurseries for each family. Later these are forwarded to points of destination of the immigrants, where these strangers are again welcomed by the Red Cross or

other agency and are extended all information regarding what to do or to whom to apply in case of accident, illness or distress.

At all times the Red Cross is pre-eminently the organization to which every one looks to carry out the universal desire to help in times of disaster. By special arrangements with the Department of National Defence, certain supplies are instantly released to the Society if need arises and immediate action is taken in the affected locality through the Divisional Headquarters of the Red Cross. In the past six years this organization in Canada has dealt with districts swept by forest fires, with villages destroyed by conflagrations, with countrysides ravaged by storms and with others where severe distress has arisen through drought.

Then through its international affiliations it was enabled to assist materially in the collection and forwarding of supplies or other relief after the great earthquake in Japan, a form of devastating catastrophe which Canada herself fortunately has never experienced.

Work of the Red Cross for ex-soldiers has consisted largely in supplementing and co-operating with governmental agencies in securing more adequate provision for all who suffered damage in the service of their country. Such work has been and is being quietly carried out all over Canada and will be for many years to come. The various Provincial Divisions of the Red Cross or Branches provide many comforts and services in addition to those from official quarters. Necessities for dependents of soldiers are supplied, regular visiting of soldier patients is done; in several provinces Convalescent Homes have been established for ex-soldiers and in others sheltered occupations for partially disabled men have been initiated.



Editorial

Editor:

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TORONTO, MAY, 1927

No. 5

Why Don't Dentists Treat Children's Teeth?

"Treat" in what follows means all those services rendered to children to preserve their teeth in a state of health and usefulness. Too frequently dentists confine the word "treat" to have reference only to those procedures which have to do with tooth pulps and local diseases resulting therefrom. Few dentists look upon filling teeth as a treatment, even of dental caries. In fact, dental caries is not looked upon as a disease. It is thought of in the class with gray hairs or bald heads. Something outside of the body and having nothing to do with it. This is all wrong. The present view is that the teeth are as much a part of the human body and as much influenced by it as any other tissue hard or soft.

In the first place few if any dentists have an opportunity to discuss matters of diet with physicians who have to do with pregnant women. The physician does not know that the teeth are so influenced by the diet of the mother that they may be developed perfect or defective by the diet. Most dentists acknowledge the influence of pits and fissures as factors in dental caries but few recognize that minute defects in smooth surfaces are abundantly present in poorly calcified teeth and are the cause of caries in such surfaces. Generally the more defects, such as pits and fissures, the more defects in smooth surfaces.

In the second place few dentists have an opportunity to see children's teeth before they are decayed or decalcified sufficiently to cause pain. Neither the parents nor the physician are trained to recognize dental caries in its treatable stages.

In the third place before the dentist sees the child it has developed bad habits of mastication, eats wrong foods, drinks wrong fluids and has developed a fear of being hurt, and in most cases the teeth are a wreck and the mouth a cesspool of decomposing food, teeth and mucous.

In the fourth place there is a kind of notion in the minds of most people that whatever is done for children should be done at a less cost than the same thing done for adults, and that children don't need to have their dental operations done as thoroughly as adults. These two wrong notions coupled with the idea that the teeth are going to be lost before long anyway are enough to decide against sound dental treatment. Too often the dentist is glad to allow the parent to think that a permanent first molar is like the rest and might be extracted.

In the fifth place many dentists don't like children and dislike having them about for fear they might make a disturbance. Their characters must be studied and this the dentist is not willing to do. The child's mouth is small and difficult of access. The teeth are small and have many anatomical and physiological peculiarities which the dentist won't study and above all, he thinks of how he could have made a gold inlay worth twenty dollars while he made two cement fillings for Willie Brown for which Willie's father would think a charge of five dollars would be too much.

The Canadian Dental Hygiene Council on Its Feet

Before the Federal Parliament closed its last session it made a grant of five thousand dollars to the Canadian Dental Hygiene Council. While this grant is not very large and will not provide treatment for every needy one in Canada, it does what is of infinitely more importance. It places dental services definitely in the category of a public health service with a national responsibility. With this acknowledgment the voluntary organizations which have been working for years to care for the dental needs of the people will go on with the assurance that their efforts are at least recognized. The close association of the Dental Hygiene Council with the Red Cross is encouraging and helpful. The council hopes with the two thousand five hundred dollars from the Red Cross and a further sum from other sources of income to prosecute work in remote districts of Canada associated with the Red Cross and among immigrants entering the country. The dental profession of Canada and the public generally owe a debt to all those lay and professional who have brought this fine piece of work to the point where definite results are within sight. We would like to mention the names of those who have been the most active in this final fruition but then we are reminded of the efforts of those of decades past which made all this possible. The result is the outcome of public and professional dental education from the days of Chettenden, Day, Willmott, Wood and Adams.

THE UNIVERSITY OF TORONTO ESTABLISHES NEW DEGREES IN DENTISTRY

The degrees of Bachelor of Science in dentistry (B.Sc. Dent.), and Master of Science in Dentistry (M. Sc., Dent.) have been established by the senate of the University of Toronto. For the bachelor's degree an extra year of work on a research problem approved by the faculty of dentistry will be required and for the master's degree, which will be under the control of the School of Graduate Studies, two years over and above the course for the regular practice degree of D.D.S. will be required. The work for the B.Sc. degree may be done any time after the third year in course and is open also to graduates.

An insurance society of England says wisdom teeth are useless and should be extracted. Dr. Ward, Toronto makes the following comment:

"By far the majority of wisdom teeth certainly are non-functioning," says Dr. R. G. Ward, the Yonge street dentist. "This is because it is not in its correct position in the mouth. If it were, it would play as important a part as other teeth, and in that case should be preserved. The wisdom tooth is necessary for the proper development of the jaw."

Wisdom teeth are so named not because they bring wisdom to the possessor nor as an indication of the amount of the cerebral grey matter inside the skull.

"They are so called," says Dr. Ward, "because they usually appear at that period in a person's life when the age of wisdom has been reached."

It is, however, not a dentistic term, but one created by popular use.

The Sydney C. B. Record copies some bad dental advice from a Chicago source, "The national mouth hygiene society," such thoughts as "tooth picks cause decay of teeth" and "wear the teeth away." "Candy is good for the teeth," "The tooth brush cuts down the incidence of dental caries," "Brush the teeth up and down" are not exactly true according to modern ideas. The high sounding name of the authority is the trouble. Dentistry doesn't know much about the organization.

The Stratford Dental inspector reported 148 pupils with perfect teeth out of 934 examined.

Dr. Wigle in addressing the Optimist Club of Hamilton said that the tooth brush was not merely a help to beauty but a help to the circulation of the gums.

Dr. Harold K. Box has been appointed as a consultant in the Ontario department of health. The announcement was made on the first of April by the Hon. Dr. Godfrey, Minister of health.

REASONS FOR CARING FOR DECIDUOUS TEETH

First of all, he declares that the child needs teeth even more than an adult, because he has a growing body to feed, and must be able to masticate a greater amount of food.

Secondly, the condition of these teeth has a bearing on the on-coming permanent teeth and for that reason should be kept in first-class condition. In the third place, all the poisons that cause rheumatism, joint stiffness and heart lesions from the permanent teeth of adults will also result from the first teeth if they are neglected.

Canadian Dental Association

No argument is needed to convince one who is interested in the status of Canadian dentistry that the Canadian Dental Association as it has functioned in the past is in need of reorganization. Consequently it was with a feeling of real satisfaction that I learned that at the convention in Halifax it was definitely decided to draw up a new constitution for the Association.

To bring about this new order of things it was decided to have delegates appointed from each province who should meet in committee, talk over our problems and draft the new constitution, which would be submitted to the various provincial organizations for ratification. At least this is the interpretation of the Halifax proceedings agreed upon by the executive committee. With this thought in mind the president, Dr. John Clay, of Calgary, has called such a meeting for May 13th in the city of Toronto, and a number of the provinces have already appointed their delegates.

This being such a critical stage in the history of organized dentistry in Canada, suggestions as to the nature of the reorganization should be welcomed at this time.

To invest the business of the Association in a House of Delegates comprised of representatives from each province is admirable, but Dr. Conboy is to be commended for the firm stand taken, that these delegates should be appointed by the voluntary organizations in each province and not by the Official Boards. This would give a much wider interest and a better representation; in fact to have it otherwise will spell disaster for the Canadian Dental Association.

These delegates should be allocated to the constituent societies based upon the enrollment of said societies.

Part of the travelling expenses of delegates to meetings might be provided for out of the general treasury and the balance by the local societies. This phase should be discussed.

The committee would be well advised to pattern our constitution as far as is practical after that of the American Dental Association which has worked out so successfully. This would mean a general membership, consisting of the members of the constituent societies. As much territory as possible should be organized and provision made for the men living in unorganized territory. Every member should pay a certain fee into his local society, a part of which should go to the Canadian Dental Association. The fee should be large enough to meet the expenses of running the Association, allowing a salary or substantial honorarium to the secretary, and include subscription to the Canadian Dental Association Journal. Membership should also include the privilege of attending conventions in other countries, or rather non-members should be excluded. For each member to pay personally into this Association will in itself create an interest otherwise impossible. If sufficient funds cannot be easily raised in this way then the provincial Boards might co-operate on a fifty cent per capita basis, as has already been suggested and which Manitoba has already agreed to, granting that there are no legal objections in any of the provinces and granting that such a donation does not make it necessary to admit unethical men to the Association.

It would further seem advisable to the writer that a convention be held annually in very close co-operation with some local convention, in such a way as to in no way interfere with local arrangements. By the mere pres-

ence of the delegates from other provinces, together with as many others as possible who might attend, there would be a stimulation of interest in the local meeting. Not to have a regular meeting of the Association presents many real difficulties.

Canada is so arranged geographically, so divided as to interest, thought and language, that those of us who love our country wish to see it so

harmoniously and efficiently organized as to make its impact felt upon world affairs. In so far as the profession of dentistry has a duty to perform in this connection, let us

“Attempt the end and never stand
to doubt

Nothing's so hard but search will
find it out.”

M. H. GARVIN.

Some Strange Psychology Met with in Dental Practice

Sometimes I'm asked to do the impossible. “These were my poor dead husband's teeth,” said an old lady pathetically. “I know he'd like me to wear them, so will you please make them fit? I can't keep them in, try as I will.” Sympathetically I explained matters, and she went away with tears in her eyes.

—
A patient came in once, looking scared to death. He told me he had swallowed his teeth. I had to explain that I couldn't extract teeth from anyone's inside, and that he should go to a doctor at once.

“I can feel them;” he gulped, touching his waist. I felt them, too,—and felt them again. Then I lifted the knitted waistcoat he was wearing and took the teeth out of a pocket in his underwaistcoat!

—
A rather poorly dressed mother and daughter applied to a dentist to have some necessary attention to the daughter's teeth. The mother rather proudly introduced her anaemic, poorly nourished, poorly developed, seventeen year old child to the dentist as a bride. You know doctor it

was like this. My husband has been out of work since last fall and a young man who was also out of work came to stay with us, not as a boarder, but as a friend of my husband. The young people fell in love with each other so we all thought they might as well get married, so we borrowed enough money from a friend who had a job to buy the license. You know the city has to keep the four of us anyway, so we thought they might as well be married. And if you would fix her teeth she would look a good deal better as a bride.

—
A woman consulted a dentist and on being asked when it would be convenient for her to pay for the services given her she said: You know my husband has been out of work all winter and strangely enough this same thing has occurred every winter for the past three years. Just as soon as the cold weather comes on he is laid off work. My son began to work last summer and the same thing has occurred with him, he lost his job as soon as the cold weather came.

Notes

Dr. Harwood of Moose Jaw, gave an address to the school trustees during their meeting, Feb. 17, 1927.

Sim Wallace says there would be better teeth if people would eat their desserts first and their fruits last.

If dentists would remember that most cases of malpractice hinge on the care and treatment after an accident has happened, much anxiety would be saved.

Dr. C. W. Hamilton was recently appointed school dentist at Stratford, Ontario.

The same old stories about the human teeth go the rounds of the press and conversation. "The baby was born with a full set of teeth, a child in some far off place has a double row of teeth. Grandmother Jones at the age of eighty-three is getting her third set of teeth." All very interesting but not true, that's all.

Dr. H. G. Hoare, Wetaskiwin, Alta., has returned to his practice after a few months holidays.

L. D. Calk publishes a report on the use of Cocoa Butter on silicate filling. The claim is made that cocoa butter should not be fused on the surface of the filling with a hot instrument because there is sufficient heat conveyed to the surface of the filling to unduly hasten its setting at such spots where the heat is excessive and this leaves a filling with checks and leaky margins. The cocoa butter should be fused in a dish and applied at the temperature of the body.

A dentist in Regina says he has found a patient with a perfect set of teeth. It all depends upon his standard of perfection.

The milk man, the candy man, the tobacco man, and the beer man, all claim that their products are good for the teeth. Why is it necessary to be making such claims so frequently? It is like Tory loyalty, some one must be doubting it.

The druggists of the United States point out the fact that both dentists and physicians are represented in Congress and they are not. So they have set themselves the task of organizing democratic and republican societies and clubs with the purpose of electing druggists to Congress. This scheme is likely to further complicate congress policies.

DENTANTICS

"Dentantics," the annual "stunt night" of the Faculty of Dentistry, was held in the University of Toronto Schools Auditorium recently, when plenty of clever acting and amusing items made the function one of the best of the University season. One of the best sketches on the programme was "Omelette", arranged as a skit or parody on "Hamlet" by members of the Third Year Faculty. The Agnew trophy, emblematic of the inter-year skit championship was won by Fifth Year with the "Cantilever Swim", a "take-off" on the Catalina swim and George Young.

Dental caries is a common cause of halitosis.

Meeting in 9 Ways

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Dr. A. E. Webster.

Dear Sir:—

I am enclosing a case history upon which I would like to get your opinion.

Patient—Boy, 12 years old, in good health.

History—On Feb. 12th, 1927, he fell at school and struck this tooth (upper right central) which was sore for two or three days, but was not loosened. No ligation or movement of the tooth at that time. No further trouble until about three weeks later, when a discoloration was noticed. Not sore to pressure, but apparently non-vital. X-Ray taken on March 28th, after consulting his mother. Tooth since then has been sore to pressure.

Orthodontia treatment has been in progress since last July, but not involving that tooth at present. No other trouble of a similar nature in the mouth, but have had difficulty in getting the boy to cleanse his teeth properly.

On suggesting that treatment of the tooth might be unsatisfactory, the boy's father was very angry, and suggested that the Orthodontia treatment had caused this trouble, and that I was directly responsible for the condition. I do not think that this is true, and would greatly appreciate any opinion or help which you can give me at this time.

Yours sincerely,

Answer:—In my opinion the Orthodontic treatment was not the cause of the loss of the vitality of the pulp of the upper central incisor. The history of the injury and the symptoms which followed are typical of a dead pulp from trauma. The pulp should now be removed and the canal treated lest worse damage is done the tooth.

Dr. A. E. Webster,

Editor Dominion Dental Journal,
Toronto,

Dear Doctor,—

When I get into difficulty in dentistry it seems to hie me back to college days, and I appeal to you. I hope this

does not worry you?

Will you be kind enough?—Twelve days ago a man brought his boy of fifteen years to my office; he had two beautiful upper centrals extracted by a base ball bat. Father and son were both feeling very badly and the mother was home crying, so it worked on my sympathies, and at the request of the father, I attempted to re-plant them.

I cleaned out the pulps thoroughly and forced a swab with carbolic acid through, then filled with gutta percha and drilled out the apical foramena and filled them with gold, then allowed the teeth to lie in aconite and iodine for about twenty minutes, swabbed out the sockets and replaced the teeth and anchored them firmly to a bar soldered to caps on each of the laterals, thus keeping his bite slightly open.

It has caused him no inconvenience, no pain, no swelling, but on looking at the case today there seemed to be some inflammation over one of the teeth though no soreness. Have I any chance of success whatever?

If you can find time to give me a little picture of what I might expect I will be very much indebted to you.

In case I might have success, how long should that retaining appliance be kept on?

Sincerely Yours,

Reply. The treatment which you have given the boy should have every possible chance for success. No one can foretell how long implanted teeth will remain in position without giving trouble. Generally they do not become acutely infected after the first few weeks have passed. They become exceedingly tight in their sockets and remain useful teeth until absorption of the root is sufficient to cause fracture.

The retainer should be removed after three or four weeks, because as you say, the bite is kept open by it, otherwise it might better be left a couple of months. The present apparent inflammation will likely subside without much damage.

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VISIT OUR EXHIBIT—DIAMOND JUBILEE CONVENTION

In a recent issue we published an article advocating state aid and philanthropy for those who could not help themselves. We made the comment that the idea was a good one if the state and philanthropy were going to persist in advocating that every person, imbecile, insane, diseased and crippled, should go on and replenish the earth with their kind. On the other hand if such were not permitted to reproduce their kind then there would be little need of state aid or philanthropy. See the "New Decalogue of Science" by A. E. Wiggam.

A reader made the following comment on the editor's note, which, we admit, was not full enough: "Such a remark is to be expected from those who have in view only their own selfish interest but not from those who have in mind the general welfare of humanity or the future welfare of the state."

A whole sermon might be written on the subject introduced by the reader. Who is selfish? The man who wants a large population (many of whom are wards on the thrifty) to whom he may sell goods to eat and to wear, or the man who would as far as possible have a population which could take care of itself? Who is selfish—the man who brings into the world child after child when he knows he is unable to rear them, or the man who would take means to prevent such cruelty?

True, our present view is to care for those who are now here no matter how hopelessly imbecile, insane, crippled or diseased, but what advantage can it be to humanity or the future welfare of the state to do so? Only

the selfish will bear children they cannot rear. But what would be a great advantage to both humanity and the state would be to hinder those from bearing children who cannot rear them. It requires little brains to bear children and much to rear them. The person who cannot rear children because of inability to support them is a 'poor type to populate a country with. Many of our hospitals would not be needed if only wise and whole persons were allowed to reproduce.

HEREDITY AND CARIES

20th March, 1927.

To the Editor.

Dear Sir,—

I trust you will allow me to make a little correction in the resumé of my address before the Academy of Dentistry in Toronto on January 4th.

The point to which I refer is with regard to my son's teeth. If the report had been full, it should, I think, have read as follows:—Notwithstanding the fact that he himself had lost most of his molars while he was in his teens, and that as a schoolgirl his wife spent most of her summer holidays in having her teeth plugged, their son's teeth at a corresponding age showed complete freedom from caries, and now at the age of twenty-five he has a full complement of teeth and a most perfect arch with normal occlusion, as was fully shown in Dr. Wallace's recent book on Variations in the Form of the Jaws.

I am,

Yours truly,

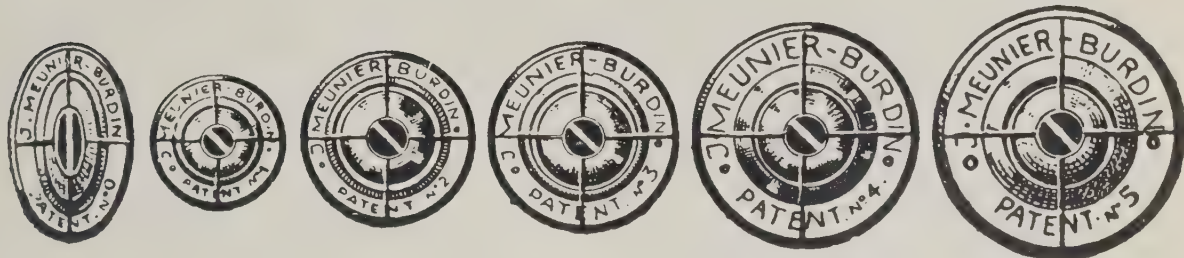
J. SIM WALLACE.

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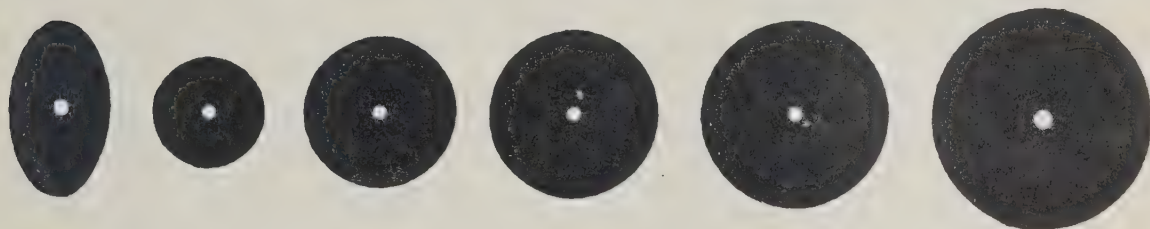
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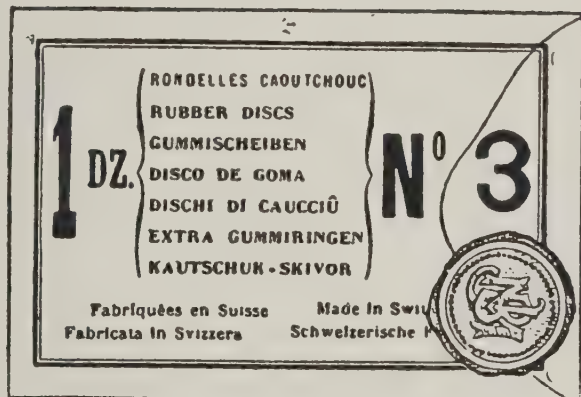


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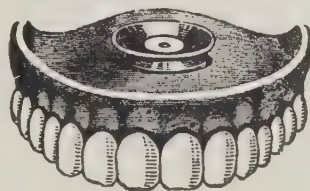


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THE FATHERS OF CONFEDERATION

Dominion Dental Journal

Vol. XXXIX

TORONTO, JUNE, 1927

No. 6

ORIGINAL COMMUNICATIONS

Sketch of Dentistry in Canada

BY W. GEORGE BEERS, L.D.S., D.D.S.

Her Majesty Queen Victoria, speaking to her dentist, once made the remark: "Yours is an important profession, for, while some need the skill of the oculist and aurist, almost all need that of the dentist." It is an interesting fact that the first movement which had any practical result towards the organization of dentistry as a profession was coincident with the Queen's accession to the throne. No previous sovereign so fully recognized its importance. The honor of knighthood conferred by her upon the late Mr. John Tomes and upon her present dentist, Mr. Edwin Saunders, gave the profession in England a social status second only to the older professions of law and medicine. Sixty years ago its literature was meagre; its science elementary; its art primitive. Eminent surgeons and physicians, such as Hunter, Sydenham, Sir Astley Cooper, Sir Charles Bell and Robert Blake, contributed works of some merit upon the natural history and diseases of the teeth. Mr. Fox, surgeon-dentist to the Duke of Kent, Mr. Thomas Bell and a few others had published excellent

works on the structure and diseases of the teeth. In France there were more numerous pioneers of dental science and art, and we are indebted for porcelain teeth to a French apothecary.

The pigmy efforts of Europe in practical development were, however, overshadowed by the giant strides made in the United States. To Europe, largely, we owe the birth of much of the progress of the science; to the United States most of its marvellous practical development. One hundred and thirty-two years ago dentistry was introduced into the United States from England by John Woofendale, a former student of the dentist to King George III.; but the first journal, society and college in the United States, which were the first in the world, are about sixty years old. Medicine can trace its history back to the schools of Cos, Rhodes and Cyrene; law, to the schools of jurists in the reign of Tarquin; but dentistry as an organized profession, was born in Baltimore, United States, within the memory of practitioners still living. In Can-

ada, during the French régime, the surgeons attached to the army extracted teeth with the key of Garengeot, a French invention, contemporaneous with that of the guillotine. After the conquest, several of these surgeons remained in the country, and one whose lineal descendant is now a practicing dentist in Quebec Province was publicly known in Quebec City, as late as 1761, as a specialist under the title of "Blood-Letter and Tooth-Drawer."

Quebec, as the earliest of our provinces, had in 1837 dentists in Montreal and Quebec cities, some of whom made periodical visits not only throughout what was then known as Lower Canada, but into Upper Canada as far west as Toronto. Now and then they gave instruction to aspiring young men, who, after tinkering for a few months in the laboratory and getting hasty clinical ideas in operating, hung out their shingle without the necessity of law or license. In this way the rude school of self-reliance made many men of mark in the ranks of the practicing dentists, who have rarely been surpassed in practical skill by the products of our modern colleges. In fact, in the very front rank of our best thinkers and workers stand some of the fast disappearing dentists of that *ancien régime*. In the dark days of the profession, when every man was a law unto himself, success depended solely upon personal application, and every man was his own teacher. There was neither individual nor collective reciprocity. The discovery of arsenic for the devitalization of the dental pulp is due to Spooner (1836), a Montreal dentist. Modern science has rendered this operation less imperative. One of the most skilful men on the continent, a mechanical genius, the author of numerous inventions outside of his profession, was Dr. W. H. Elliott, of Montreal, a brother of Dr. James Elliott, of Toronto. The late Dr. A. Bernard, of Montreal, formerly mayor

of the city, was also a man above the average, both as a dentist and a politician. In 1842 he made an unsuccessful attempt to get a clause regulating dental practice into a medical bill then before the Legislature. Coincident with the passage of a law in Alabama, this was the first of the kind. The late Hon. Dr. P. Baillargeon, of Quebec, and Dr. Charles F. F. Trestler, of Montreal, were the most eminently successful among the dentists of French origin. The late Dr. McKee, of Quebec, was the first Canadian to graduate in a dental college. The late Dr. J. H. Webster, of Montreal, claimed to have been the first in British America to administer ether and chloroform.

In Ontario, Mr. Rand was the first dentist in Toronto in the early forties. He became acquainted with Lord Elgin, who induced him to go to London, where he built up a large practice. In 1845 there were several practising in Toronto. Among the notabilities in their line about 1855 were Dr. George L. Elliott, J. W. Elliott and W. C. Adams. Dr. C. S. Chittenden settled in Hamilton in 1849, where he practised for forty years. Dr. G. V. N. Relyea, formerly of Belleville, was one of the oldest and most successful practitioners in Ontario. There was a sturdy class of pioneers in the forties, who paved the way for reform—patient and practical, and most of them ethical, without any other code than their own personal honor. In the summer of 1860, Dr. Charles Brewster, of Montreal, issued a protest against the evil then existing of exhibiting specimens of mechanical dentistry at provincial exhibitions. This protest was signed by the leading dentists of Upper and Lower Canada, and was the first successful blow aimed at charlatanism. In a postscript to a circular he asked the following question: "What is your opinion as to incorporating the dentists by Act of Parliament, and by obliging all those who in future may wish to prac-

tice in Canada to pass a proper examination before a Board of Dentists?" There was a general approval of the proposition, but Dr. Brewster realized that on account of the numerical strength of the profession in Upper Canada, the first steps should be taken there.

Among his principal correspondents was Dr. B. W. Day, of Kingston, Ontario. It was not until January, 1867, that Dr. Day carried out Dr. Brewster's suggestion by inviting a number of dentists to meet at Toronto to organize a dental association. A draft of the "Act respecting Dentistry" was presented; a provisional Board of Examiners was appointed; forty-five active and fifteen incipient members (under five years' practice) were enrolled. On the 2nd of June a meeting of the Provisional Board and members was held in Toronto, and the following officers appointed for two years: Messrs. Day, Callender, Chittenden, O'Donnell, Relyea, G. L. Elliott, Scott, Wood, Bogarth, Kahn, Meacham, and Lalonde. The following were elected to special offices: B. W. Day, Kingston, President; J. O'Donnell, Secretary; C. S. Chittenden, Treasurer, and H. T. Wood, Registrar. Dentists having had five years' practice were entitled by the Act to a license without examination upon proof of practice and the payment of the fee. In July, a second meeting was held in Cobourg. In January, 1868, 80 per cent. of the legitimate dentists of the province were present. The Medical Council and the heads of the medical schools in Toronto gave every possible encouragement and assistance to the movement for statutory incorporation, and in January a petition for the enactment of such was presented to the Legislature of Ontario, then in session. On the 4th of March, 1868, the profession was incorporated as the "Royal College of Dental Surgeons of Ontario." This was the second dental statute in the world—a very inefficient one in five clauses preceding it in Al-

abama. Undoubtedly, the Ontario Act was the first really efficient dental incorporation measure. Since its passage, 981 certificates of license have been granted. A standard of matriculation examination equivalent to that of the Faculty of Arts of a Canadian or other recognized university, or an equivalent certificate issued by the Education Department of Ontario has been established, ahead of any dental college in the world.

In October, 1869, the teaching department of the Royal College of Dental Surgeons was organized, but the school was closed at the end of the first session on account of financial embarrassments. In July, 1875, the directors requested Dr. J. B. Willmott and Dr. Luke Teskey to undertake the re-organization, and in November the School of Dentistry opened with eleven students. After various vicissitudes and earnest effort on the part of the staff, to which was added Dr. W. T. Stuart and Dr. W. E. Willmott, a flourishing existence was insured, so that in 1895 it was decided to erect the substantial building which now stands on College Street, Toronto, costing \$46,000 and belonging to the dentists of the Province. The work was begun in August, 1895, and the building was opened October 1st, 1896. One of the difficulties in the way of complete success was the absence of the power to confer the degree of Doctor of Dental Surgery, and in May, 1888, the Royal College of Dental Surgeons was affiliated with the University of Toronto, and the first examination for that degree held in March, 1889. This was the first examination ever held by a British university for a doctor's degree in dental surgery. This degree confers no legal right to practice: the license (Licentiate of Dental Surgery) is alone necessary. In 1868 there was only one practitioner in Ontario holding a dental degree; in 1900 there are 519 members of the Royal

College of Dental Surgeons possessed of the degree. The building is one of the most modern and best adapted dental colleges in the world. Dr. H. T. Wood, of Toronto, Chairman of the Building Committee, has been a member of the Board of Examiners since 1868. It would be unfair to omit mention of the valuable services rendered to the cause of dental education in Ontario by Dr. J. B. Willmott, of Toronto, Secretary of the Dental Board and Dean of the College. Soon after the first organization, in 1867, he was granted a certificate of license, immediately took an active interest, and was the head and front of the reorganization in 1870, when he was elected on the Board of Examiners. He has ever since been a member and its secretary. Mainly through his personal devotion, amid discouragements and some factional opposition the profession in Ontario occupies a position in educational matters second to none in the world. The Ontario Dental Society, London Dental Society, Eastern Ontario Dental Society, the associations of each Province of Canada, and other such voluntary associations are also doing splendid practical and ethical work for the profession.

On the 2nd of September, 1868, Dr. Charles Brewster called a meeting of Montreal dentists to form the nucleus of a dental association for the Province of Quebec. Dr. Brewster requested Dr. Bernard to act as Chairman, and Dr. W. Geo. Beers was appointed Secretary. On the 17th of the same month a meeting of the dentists of the province was held in Montreal and the association formally organized. In February, 1869, the petition praying for incorporation was presented in the local legislature; in March the bill became law. The politics of dentistry in Quebec have necessarily differed very much from those of any other province on account of the existence of two legal languages and the necessity for the harmonizing of educational efforts so as to bring

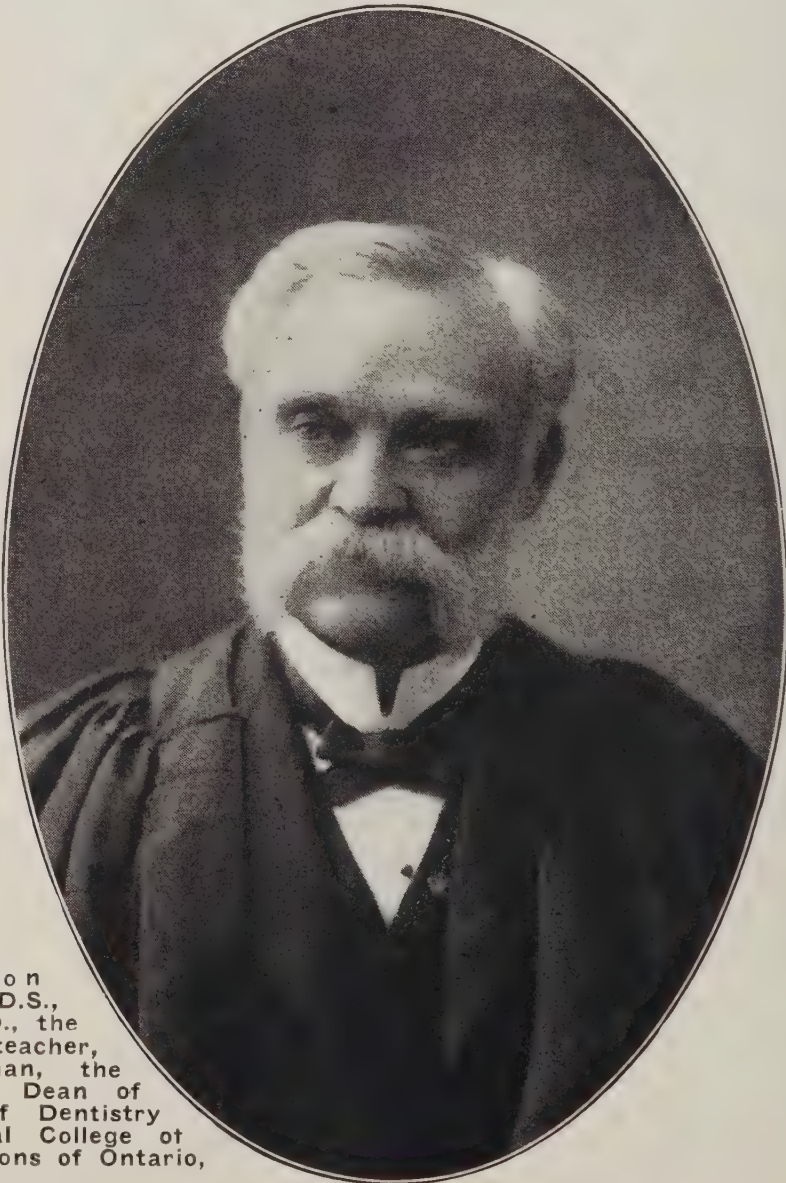
about fusion instead of confusion. A united French-English association and Board of Examiners and, in 1892, a united French-English Faculty in the college were the result of this most fraternal feeling. The examinations are held in both languages, and textbooks in French have been provided for French students. In 1892 the Board of Examiners organized the "Dental College of the Province of Quebec." Each branch had an English and a French professor; a large clinical staff was also appointed. The work, which fell upon a few men, was most arduous, and as differing from Ontario, the persistence of faction met with some success in the local legislature. However, the college continued in its modest way, none of the teachers being paid until, in 1896, it was affiliated to Bishop's University, Lennoxville, for the purpose of obtaining the degree of Doctor of Dental surgery.

In June, 1868, the first dental journal in Canada was published in Montreal under the name of the *Canada Journal of Dental Science*, a monthly of 32 pages. The first year it had just sixty-two paid subscribers, the second year ninety-one, but in the third year it obtained the third largest circulation among the many published in the United States. In January, 1889, it was succeeded by the DOMINION DENTAL JOURNAL, published by the Nesbitt Publishing Company, Toronto, as a quarterly. It was made a bi-monthly for several years, and in 1894 became a monthly. It is the official organ of all the dental associations of the province. As late as 1868 there were only twelve persons practising dentistry in Nova Scotia, and not more than two or three who had degrees. There were fewer in the other Maritime Provinces. The movement for legislative reform in Nova Scotia and, in fact, throughout the adjoining province, was due to Dr. A. C. Cogswell, of Halifax, who secured an Act to incorporate the Dental Associa-

tion of Nova Scotia on May 19th, 1891.

In 1838 L. E. Vanbuskirk was practising in St. John, New Brunswick, and it is a dubious compliment to say that he was the only subscriber in British America to the first volume of the American Journal of Dental Science, of Baltimore, the pioneer of dental journalism. New Brunswick dentists obtained incorporation in 1891; British Columbia, 6th April, 1886; North-West Territories, July 1st, 1890; Prince Edward Island, 15th July, 1891. Canada has contributed some of its leading practitioners and professors in dentistry to the United States. Among them are Dr. G. V. N. Relyea, Oswego, N.Y., one of the fathers and founders of the professions in Ontario; Dr. B. W. Day, now proprietor of an orange grove in California, the father of den-

tistry in Ontario; Dr. C. N. Johnson, a distinguished professor in the Chicago College of Dental Surgery and one of the most eminent practitioners and writers. Dr. Wm. R. Patton, formerly of Quebec, removed to Cologne, Germany, about twenty-four years ago, and occupies a Court appointment. Dr. E. Lafaivre, formerly of St. John's, Quebec, was associated with the late Dr. Thomas W. Evans, of Paris, dentist to the Empress Eugenie. Dr. Lafaivre died in Marseilles. Even in the land of the Aztecs Canadian dentistry is represented in the person of Dr. J. W. Bastow of Mazatlan, Sinaloa, Mexico. Dr. Brewster is enjoying a well-earned rest at his lovely "Camp Lodge" on the Richelieu River. *Read at a meeting of Eastern Ontario Dental Association, June, 1900.



J. Branstons
Willmott, D.D.S.,
M.D.S., LL.D., the
scholar, the teacher,
the gentleman, the
founder and Dean of
the School of Dentistry
of the Royal College of
Dental Surgeons of Ontario,
1838-1914.

History of Dentistry in Ontario

W. E. WILLMOTT, D.D.S., L.D.S., SECRETARY OF THE ROYAL COLLEGE
OF DENTAL SURGEONS OF ONTARIO.

To span the gulf in Dentistry in Ontario between 1867 and 1927 with a reasonably short "bridge" means that of necessity only a few "pontics" may be assembled.

When the Ontario Dental Society was organized in 1867 the most important subject to be considered was some legislation to control the profession. After much endeavor and many a despair an Act was finally passed by the first session of the Legislature and on March 4th, 1868, the "Royal College of Dental Surgeons of Ontario" was officially incorporated. With the exception of an Act passed in Alabama, in 1841, the "Act Respecting Dentistry" antedates all other Dental Legislation.

Under the Act the Government of the profession was entrusted to a "Board of Directors" to be elected by the members of the Profession—the original member of twelve directors was later changed to eight and still later to nine. Since 1892 the Faculty of the School of Dentistry has also appointed one of its members to the Board.

The Board, which has up to the present held one hundred and thirty-one meetings, was given full authority to control the entrance into the profession—the length of indentureship—the curriculum to be fulfilled and the examination to be passed before receiving a licence to practise in Ontario.

The rights of those in practice at the time of the passing of the act were fully safeguarded:—British subjects who had been in practice for five years were granted the license and those in practice for

three years were required to pass an examination.

The preliminary requirement beginning July, 1872, was the passing of a "matriculation" examination held by one or more members of the Board appointed for that purpose in Orthography, English Grammar, Geography, Arithmetic, English History and Composition. The standard was gradually raised:—In 1878, High School Entrance; 1880, High School Intermediate; 1888, Departmental Non Professional Third Class; 1889, Latin Compulsory; 1896, Arts Matriculation; 1923 Pass Matriculation, subjects specified; 1927, Honour Matriculation, subjects, specified.

The period of indentureship with an L.D.S. has varied at different times; 1868, two years including one session at a Dental College; 1875, three years; 1876, two years with two sessions at the School of Dentistry of the R.C.D.S.; 1882, two and one half years; 1888, three years; 1892, three and one half years with three sessions at College; 1903, four sessions at College with indentureship only between third and fourth sessions, 1912, indentureship abolished; 1921, five sessions at College, two months in office or one month in College Infirmary between fourth and fifth years.

As all students beginning the study of Dentistry after the passing of the Act were required to attend one session at a Dental College and as there were only seven schools on the continent (Baltimore, Cincinnati, Philadelphia, New York, St Louis and Boston) a desire for a

school in Toronto was earnestly expressed.

In July 1868 the Board appointed a committee to "make arrangements with the Medical Schools or others to give instruction in Dentistry, no arrangements to be made involving this Board pecuniarily."

This committee reported: "1st that we consider it impracticable and inexpedient and therefore not judicious to start such an institution at the present time. 2nd that the previous considerations were premature."

However in the fall of 1868 the Canada Dental College was opened by G. L. Elliott, with a Faculty of 4 L.D.S.'s, 3 M.D.'s and 1 M. A.

The scope of the teaching may be judged from these extracts from the announcement of the College: laws or principles in treatment of the dental organs, in health or disease, during the various stages of development and after; knowledge and surgical treatment of various diseases arising from a morbid state of the teeth and organs composing the dental apparatus; extraction, filling, filing, and inserting teeth; rules and principles of dentistry—showing the inseparable connection of dental science with dental mechanism; all the latest modes of inserting teeth, regulating teeth, artificial palate, etc., etc.; the general principles of pathology with proper preparation and specimens; materia medica with principles of therapeutics, illustrated by painting and dried specimens; chemistry at the University of Toronto; anatomy including dissecting; dental anatomy; manufacture and administration of nitrous oxide; clinical lectures.

The session was from December 1st, 1868 to March 1st, 1869—fees, \$50.00.

It is to be noted that at this early date the advantage of dissecting the human body was recognized.

Although this was a strictly private undertaking, the Board recognized its course and accepted its students.

Evidently the venture was not a financial success as there is no record of a second session being held, although the demand for a school still existed.

The Board then endeavoured to meet this demand and in July, officially established a Faculty consisting of 11 M.D.'s (practically the Faculty of a local Medical College) and 6 L.D.S.'s, and granted \$300 towards the expenses. The curriculum contained all mentioned in that of the first college and in addition, physiology, histology. A circular letter was sent to all licentiates, and known prospective students announcing the course.

When the session opened on Friday, October 1st, 1869, two students presented and completed the six months' course. These two are still living (June 1927) Benson Gilbert of Belleville and James Woods of Sarnia.

At the close of the session the Board faced a deficit of about \$125.00 and in July 1870 a resolution was passed cancelling the arrangement with the Faculty, and placing all the assets in the hands of a committee. In January, 1871, the treasurer was instructed to sell the furniture, etc., and pay all liabilities.

After these two disastrous experiences no further attempt was made to organize a school until 1875.

As the students who graduated from an American school returned to Ontario with a Doctorate degree there developed an agitation to have such a degree conferred in Ontario. Hence in 1874, application formal and informal was made to the Legislature and to each University in Ontario (with one exception) for such arrangements as would enable Ontario students to secure the degree of

D.D.S. From the refusal of all these applications the Board deduced the fact that dentistry was not considered of sufficient importance to demand recognition by the Universities.

This idea coupled with the still growing demand for some school in Ontario induced the Board at its meeting in March, 1875, to authorize the member from Kingston to informally approach Queen's University to admit the R.C.D.S. to affiliation: failing this, application should be made to the Dean of the Philadelphia Dental College.

Evidently nothing came of these negotiations for at the meeting in July, 1875, after receiving a strong resolution from the Ontario Dental Society, Dr. J. B. Wilmott, who had for two winters conducted a private school, and Dr. Luke Tesbey were persuaded under certain conditions to undertake the formation of "the School of Dentistry." The Board made a grant of \$400 towards furnishings and rent. The first session opened on November 2nd, 1875, with eleven students in attendance—of whom R. M. Fisher, Wiarton, & Jos. Pentland, Peterborough, are still in practice. It is interesting to note the report of the Faculty of the work done in the Infirmary during this session—

"259 extractions, 244 teeth on rubber base, 2 on pivots, 57 gold, 54 amalgam, 28 cement, 7 Hill's stopping, and 18 tin fillings, 18 cases of putrescent or devitalized teeth have been successfully treated."

In 1877 Dr. W. T. Stuart, in 1889, Dr. W. E. Wilmott, and in 1892, Dr. A. H. Hipple (now Dean of the Dental Department Creighton University, Omaha) were added to the staff, and when the University took over the Faculty in 1925 it consisted of 63 members.

After two sessions the school outgrew the accommodation of two rooms at 46 Church St., and moved

to much larger premises at S. W. corner Victoria and Richmond Sts. These in turn were not adequate and in 1887 a portion of a large building at 13 Louisa St., was obtained and two sessions later, the whole building.

While the classes were small and the remuneration very meagre, the profession and the Board were quite willing to allow the Faculty to assume all the responsibility and divide what surplus there might be. However when the classes grew and the surplus began to compensate for the earlier lean years, objection developed in the Profession, especially in the eastern portion of the Province. The upshot of a prolonged propaganda was the taking over of the School by the Board in 1892. The members of the staff were paid a stated salary and the surplus each session was laid aside to provide funds for a suitable building. In October, 1896, the commodious and convenient building at 93 College Street was opened. On two occasions this building was enlarged. When in 1908 the trustees of the Toronto General Hospital purchased this property, another site was chosen and in 1909 the building at 240 College Street was opened. On account of the large post war classes there have been two additions to the building. The property and furnishings are valued at \$475,000.

In 1925 the Faculty of Dentistry of the University of Toronto was established and under certain terms of agreement, the University became the owner of this property.

As the earlier attempts to secure a D.D.S. in Ontario had been futile and as many of the graduates continued to attend American Schools for the Doctorate degree, renewed efforts were made to obtain affiliation with the University of Toronto. This was finally accomplished, largely due to the efforts and influence of Sir Wm. Mulock.

"It is a somewhat interesting and fitting coincidence that on the day Ontario Dentistry attained its majority, March 4th, 1889, twenty-four dentists and dental students paid their fees and filed their applications for admission to the first examination ever held by a British University for a Doctor's Degree in Dental Surgery" (D.D.J. Vol 1, p. 161).

Separate examinations were conducted by the Board for the L.D.S. and by the University for the D.D.S. until '19, when arrangements were completed for a combined examination the returns from which were reported both to the Board and to

the Senate of the University. With the class of 1927 there have been 2630 candidates (including 24 women) receive the D.D.S. from the University of Toronto.

In 1893 Trinity University established a curriculum leading to the degree of D.D.S. During the 15 years of its duration 69 degrees were conferred.

With the University taking over the instruction of the students the Board will be relieved of a large part of its former responsibilities and will continue to devote its energies towards the betterment and protection of the profession.

Constitution and By-laws of the Ontario Dental Association, Organized July 2, 1867

(Editor)—Here follows the original constitution and by-laws of the Ontario Dental Association as found among the papers of Dr. Neelands, Lindsay, Ontario, 1867. His is perhaps the only copy now extant.

John O'Donnell, President.
J. H. Bryant, Vice-President.
W. H. Porter, 2nd Vice President.
L. Lemon, 3rd Vice-President.
J. Stuart Scott, Recording-Secretary.
R. G. Trotter, Corresponding Secretary.

L. Clements, Treasurer.
Lyman Wells, Librarian.

PREAMBLE

This Association is instituted with the view of promoting professional and social intercourse among Dental practitioners in the Province of Ontario, Dominion of Canada, and to encourage a disposition for investigation on their part in every direction which relates to the principles and practice of the profession and collateral science. With this object in view, essayists shall be regularly appointed to prepare dissertations embodying the results of actual experience, observation, research and reflection on

such subjects. The papers to be read at the regular meetings, and to be the subject matter for discussion on the part of the members.

CONSTITUTION

ARTICLE I.

NAME

This Association shall be known as the Ontario Dental Association.

ARTICLE II

MEMBERS

This Association shall consist of Active, Corresponding, Honorary and Incipient members.

Sec. 2. Active members shall consist of Dental practitioners in the Province of Ontario, who shall have had an established office practice of five years standing, shall be 21 years of age, and of good moral character.

Sec. 3. The Corresponding members shall consist of practitioners of Dentistry residing in other Provinces of the Dominion of Canada, or in

foreign countries, who manifest a disposition to advance the science and art of the profession by contributing to its literature.

Sec. 4. The Honorary members shall consist of practitioners of Dentistry who have honorably retired from practice, or of Medical practitioners or others, who have made valuable contributions to the science and art of Dentistry.

Sec. 5. The Incipient members shall consist of Dental students who shall have studied two years in a regular practitioner's office. They must produce satisfactory proof to the Committee of their competency to practice, and be recommended by the members of the Association, and if elected will be allowed to speak on all subjects, but not to vote.

ARTICLE III.

Section 1. *Officers.*—The officers of this Association shall consist of a President, three Vice-Presidents, Recording Secretary, Treasurer, Librarian, and an Executive Committee of five members, and such other committees he shall be designated by the By-Laws; which officers shall be chosen annually by ballot.

Sec. 2. Active members only shall be eligible to any office in this Association, or shall be qualified to act on any committee.

Sec. 3. *Amendments.*—This Constitution may be altered or amended with the consent of two-thirds of the members present, the proposition stating the amendment in writing, at a regular meeting, and lie over until the next regular meeting.

BY-LAWS

ARTICLE I.

The President shall preside at all meetings of the Association, call special meetings, appoint all committees not otherwise provided for, sign all certificates, and be a member *ex-officio* of all standing committees.

Sec. 2. It shall be the duty of the Vice-Presidents, according to seniority, to fill the place of the President in his

absence, and assume all the duties of that office. In the absence of these officers, a chairman *pro tem* shall be appointed *viva voce*.

Sec. 3. The Recording Secretary is to take and preserve correct minutes of the proceedings of the Association, to notify members of the meetings, to keep a correct list of the members of the Association, with the date of their election, resignation, or death, and to lay before the Association, at the annual meeting a summary of its transactions for the preceding year.

Sec. 4. The Treasurer shall take charge of the funds of the Association and attend to the collection and payment of moneys, but no moneys are to be paid by him without an order signed by the President, and countersigned by the Recording Secretary. He is to keep a clear and detailed statement of all receipts and expenditures, which is to be laid before the Association at the annual meeting, and shall deliver up to his successor, on retiring from office, all books, papers, and funds in his possession belonging to the Association.

Sec. 5. The Librarian shall take charge of all the books and manuscripts belonging to the Association, keep a correct list of all *donations* or *deposits* of books, of those missing or lent, and to report on the state of the Library at the annual meeting.

ARTICLE II.

Sec. 1. *Executive Committee.*—The Executive Committee shall ascertain the qualifications of applicants for membership, and report the same to the Association; audit all accounts of the Association; provide a suitable place to hold the meetings in, and perform such other work as may be referred to them by the Association.

Sec. 2. *Membership.*—Candidates for membership must send in their application at least one week before the day of meeting to the Secretary, who shall refer the same to the Executive Committee, and their report shall be acted upon at the next regular meet-

ing, two-thirds of those present being required to elect.

Sec. 3. No person shall avail themselves of the privilege of active membership, unless he shall have signed the Constitution, and paid the membership fee, and an omission of two years paying shall constitute his election void.

ARTICLE III.

DUES

The admission shall be Four Dollars, to be paid before signing the Constitution, and the annual fee to be One Dollar per annum, payable on or before each annual meeting.

ARTICLE IV.

PRIVILEGE OF MEMBERS

Sec. 1. Active members shall be entitled to privileges and gifts of the Association.

Sec. 2. Honorary, Corresponding and Incipient members shall be allowed a seat in session, and have a privilege to debate all questions not involving pecuniary outlays.

ARTICLE V.

EXPULSION OR RESIGNATION OF MEMBERS

Sec. 1. Any member may be expelled for unprofessional conduct, malpractice, or gross immorality, on being duly convicted thereof, three-fourths of the members present at a regular meeting voting for expulsion.

Sec. 2. Any member shall have leave to resign upon application made in writing, providing all arrearages due the Association are paid.

ARTICLE VI.

MEETINGS

Sec. 1. The annual meeting of this Association shall be held commencing on the last Tuesday in the month of July, at such time and place as shall be chosen from year to year to commence at half-past seven p.m.

Sec. 2. The semi-annual meetings shall be held on the last Tuesday in the month of January in each and

every year, at such place as shall be decided at the last previous annual meeting, and to commence at half-past seven p.m.

ARTICLE VII.

AMENDMENTS

These By-Laws can be altered or amended at any regular meeting by a two-thirds vote of the members present, notice of alteration or amendment being given at a previous meeting.

All motions and notices of motions to be submitted in writing.

ORDER OF BUSINESS

1. All meetings of the Association shall be called to order by the presiding officer at the hour appointed.

2. Reading and confirming of the minutes of previous meeting.

3. Calling roll of the Association.

4. Applications for membership and elections.

5. Reports of Executive Committee and of the officers.

6. Unfinished business.

7. New business.

8. Written and oral communications.

9. The presentations of specimens of morbid anatomy and operative and mechanical dentistry.

10. Notices of motion.

RULES OF ORDER

Rule 1. When a question is before the Association, no motion shall be entertained, excepting to lay it on the table, to postpone it, to commend it, to amend it, but in taking the question, these motions shall have precedence as in order here alluded to.

Rule 2. All amendments shall be considered in the order in which they are offered.

Rule 3. No substitute shall be entertained that destroys the intention of the original motion.

Rule 4. All motions to lay a subject upon the table shall be put without debate.

William George Beers, D.D.S., L.D.S.

One of the stalwarts in dentistry has fallen. Dr. William George Beers died at his residence, 107 Metcalfe Street, Montreal, on December 26th, 1900, aged 57 years. The cause of his death was heart disease and with complications. He was born, May 5th, 1843, in the city of Montreal, and obtained his early education at Lower Canada College and Phillip's School, Montreal. His training for the profession of his choice was obtained in the office of Dr. Dickenson, of Montreal, after which Dr. Beers entered upon the practice of dentistry in his native city in 1865. In addition to the L.D.S. degree of the Province of Quebec he obtained the L.D.S. degree of the Province of Ontario in 1870, and subsequently the same degree in England. At the affiliation of the Dental College of the Province of Quebec with Bishops College, Montreal, the degree of D.D.S. was conferred upon him.

On November 27th, 1867, Dr. Beers was united in marriage with Mary Elizabeth Hope, of Kingston, Ont., who, with their two sons, Arthur Hope Beers, M.D., C.M., D.D.S., L.D.S., and James Crawford Beers, now mourns the loss of one of the most devoted of husbands and kindest of fathers. The death of their only daughter, six months previous to the death of Dr. Beers, was a sad blow which probably hastened his end.

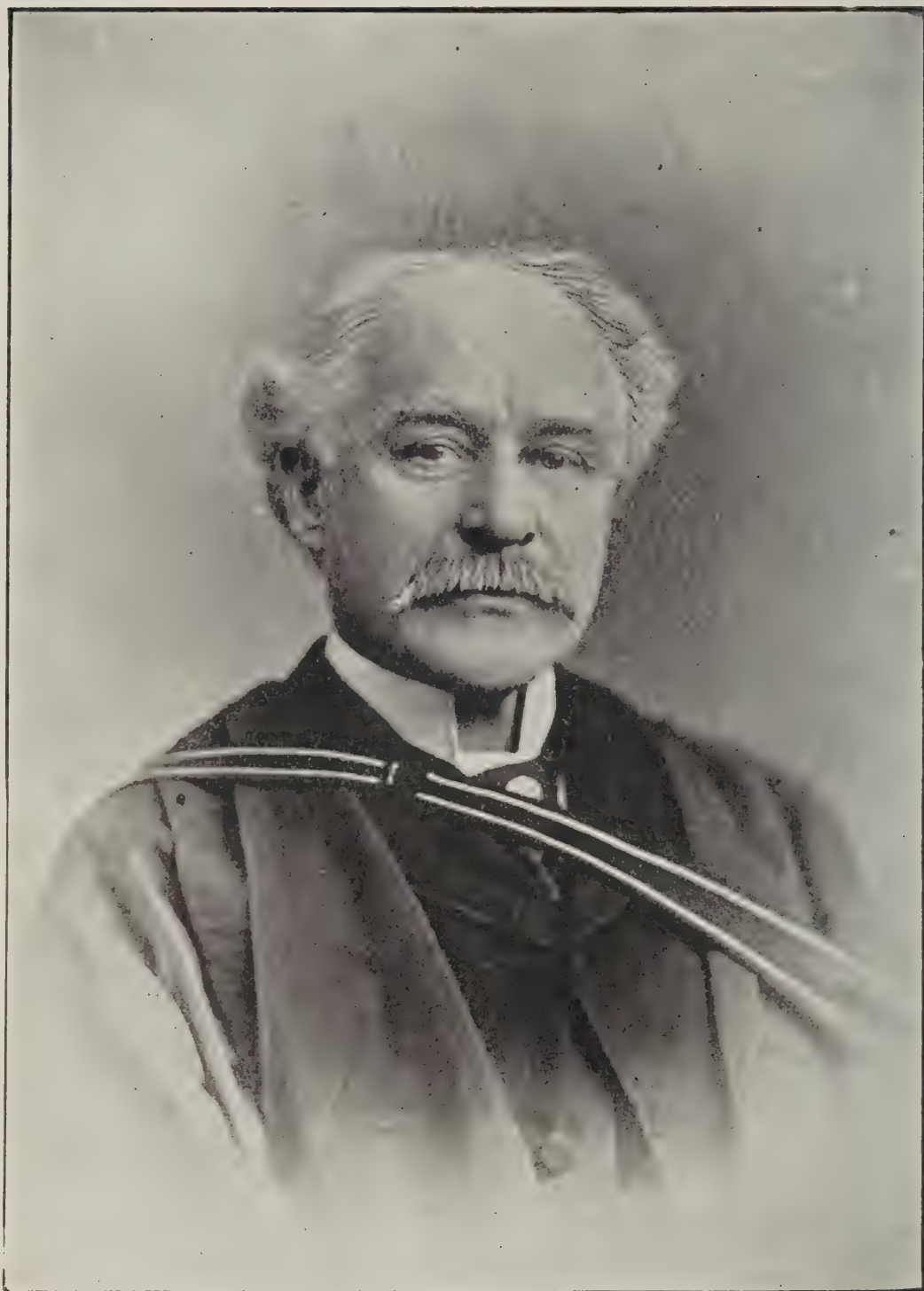
Dr. Beers was a prime mover in the struggle for the advancement of the dental profession in the Province of Quebec in a legal and educational sense, and to his untiring and disinterested advocacy of an incorporated profession is largely due the high status of dentistry in that province. For many years he served on the Provincial Dental Board of Examiners as secretary and president at a time when

this work was entirely a labor of love.

The difficulties of establishing a college were largely increased by the necessity of having lectures given both in English and French. Dr. Beers was for several years a lecturer in the college, and the esteem in which he was held by his colleagues is evidenced by the fact that he held the position of Dean of the Faculty until he voluntarily severed his connection with the college. He was an honorary member of nearly all the provincial dental societies in Canada, and a corresponding member of several British and American societies. He was ever a forceful, fearless writer on dental subjects, and was widely known in dental circles not only in his own land but throughout the English speaking world, enjoying the personal friendship of such men as Sir John Tomes and Sir Edwin Saunders in England, as well as many of those who have moulded the thought of the profession in the United States during the last thirty years.

Dr. Beers' characteristic generosity is well illustrated by the mention of his donation a few years ago of his splendid dental library, consisting of over five hundred volumes, to the Dental College at Toronto.

The editorial pages of this Journal for the past twelve years, and also those of the *Canadian Journal of Dental Science* back in the seventies are best samples of Dr. Beers' trenchant style and of his untiring zeal for the advancement of his profession. He never worried berating the quack, and it is interesting to note, among other advanced ideas advocated years ago, that as far back as 1889 an appeal was made by him for a Dominion Dental Association, having for its aim the securing of reciprocity between the provinces in the matter of diplomas, a



W. George Beers, D.D.S., L.D.S., the Author, the Journalist, the Sportsman,
and the Citizen.

question that is just now engaging the thought of those interested in dental education throughout Canada, and which will in some form, we trust, become in the near future an accomplished fact.

The *Canadian Journal of Dental Science*, edited and published for several years by Dr. Beers, was the first attempt at dental journalism in Canada, and had a large circulation, not only in Canada but also in the adjoining Republic and in Great Britain.

When we view the life of Dr. Beers outside his profession we are amazed at the versatility of his talents, and the many important movements he was enabled to inaugurate. He was above all else a patriot. At this hour when all hearts are bowed with sorrow for the death of our beloved Queen, Victoria the good, "of noble virtues and high renown," no Briton would have grieved more sincerely, had he been in life, than George Beers. "Here is a picture of the Queen, God bless her," he said, as he presented a coin to a poor child who had done him a service. Although a most amiable and peaceable man he was always ready to defend the honor of his Queen and country, not only in private life, but on the field of battle. During the Fenian raids of 1866 and 1870 Beers served at the front, being one of the original members of the Victoria Rifles. He organized No. 6 Company, largely from the old Beaver Lacrosse Club. Passing through the ranks he retired with the rank of Captain in 1881, and subsequently became a member of the Victoria Rifles Reserve. He did not hesitate to express himself on any national question. In October, 1888, he delivered an address before the New York State Dental Society at Syracuse, in the course of which he castigated the people of the United States of America pretty strongly for its treatment of Canada. Some years ago when there was a movement among certain classes in Canada for annexation to the

United States his pen was wielded vigorously in favor of British connection. "I would teach a boy," he said to the writer a few weeks before his death, "the Lord's Prayer first, and God Save the Queen next."

In the athletic field Beers was a prominent figure, and is known throughout Canada as "The father of lacrosse," Canada's national game. He saw it played by the Caughnawaga and St. Regis Indians, and saw in it a game well calculated to develop the youth of Canada. He formulated the first set of rules for the game which are practically the rules in use to-day. He also wrote the first book on the subject of lacrosse.

In 1876 he organized and captained a team of Canadian and Indian lacrosse players who visited England, Ireland and Scotland, and by special request played before the Queen, who presented each player with a photograph of herself bearing her autograph.

In 1883 a second lacrosse team toured Great Britain under his management. Dr. Beers was widely known to magazine readers as a writer on Canadian sports and pastimes, contributing series of articles to the leading American magazines, among others to Lippincott, Scribner and Century. He was the only life member of the Montreal Amateur Athletic Association, and the honorary life president of the Montreal Lacrosse Club. He was one of the founders of the Canadian National League.

At his funeral, which took place on December 28th, the members of the Montreal Athletic Association, Victoria Rifles Reserve, No. 6 Company of the Victoria Rifles, and the different Lacrosse and Snowshoe Clubs were in procession. To quote from a Montreal daily, "A well-known dentist, a fearless patriot, a famous athlete, an efficient militia officer and a much-respected citizen has passed away in the person of Dr. William George Beers."

G. S. M.

Canada Not For Sale

SHOWING THE VERSATILITY OF DR. BEERS.

In order to give some idea of the stalwart patriotism of Dr. Beers, the following speech, delivered by him at Syracuse, N. Y., on the 25th October, 1888, at a banquet given by the New York State Dental Association, will well repay a careful perusal.

Coming as it did at a time when so much feeling had been aroused by President Cleveland's retaliation policy, this spirited and fearless defence of Canada's position did much to encourage and hearten up Canadians, as well as to elevate this country in the estimation of fair-minded Americans.

Dr. Beers was an honored guest of the American association upon this occasion, and in response to the rather strangely worded toast of "Professional Annexation," he spoke as follows:

Mr. Chairman, Ladies and Gentlemen,—I must confess to a good deal of embarrassment in replying to a toast which is intended to be both professional and political, but I have been specially asked to do so by the chairman, and if I should offend anyone, as I must say exactly what I think, I can only offer to settle on the spot by inviting you, as the boys say, to "come out in the alley!" I have neither the presumption nor the vanity to imagine that I am able to do justice to the personal and professional courtesies which Doctor Jonathan has always bestowed upon his Canadian friends, as well as to the magnificent ignorance—sometimes ill-nature—which Senator Jonathan has recently lavished upon his Canadian foes. But I can assure you that not even the professional liars that supply the New York "Herald" with Canadian news, or the wily politicians who eat forked lightning for breakfast and dynamite for dinner; not even the

insane malice of men who hate Canada, as they may hate Cyprus, because it belongs to Britain; not even this can lessen the admiration Canadians have for the many noble and generous traits of character which belong to their American cousins. I am sure I speak, too, for my brethren from loyal Toronto, when I say that we have too often been under deep professional obligations to the kind nature of the cousin we still, from custom, call "brother," not to know that, however we differ politically, you

RESPECT OUR NATIONAL CONVICTIONS

as you wish your own respected; and that as you choose to hit at us hard, you have enough of English fair play to take a drubbing back, and to allow the possibility of Canadians loving and defending the fame and good name of the Dominion, quite as much as you love and defend that of your Republic. No one more than loyal Americans would despise the poltroon who carries his patriotism in his pocket; the disloyalty of the political parasite who would make patriotism a house of cards, and dollars the chief end of a people; intriguers who hiss out secession or annexation when they fail to get their political crime or crotches enshrined; men whose hunger for notoriety and power is a fever of existence. I am sure that you have nothing but contempt for any free people who measure their allegiance purely by commercial standards, and who, fearing to face the difficulties which meet every nation, turn peddlars instead of protectors of their national birthright. Just as you had and have your croakers and cowards we have ours, but Mr. Chairman, Canada is not for sale! There have been prophets like Goldwin Smith since the days of Elizabeth,

who have predicted England's decline within their time, but all the colonial greatness of England has been developed since the time of Elizabeth. We have, as you have, bitter partisans in the press and in politics who delight to foul their own nest, who revel in the rain that destroys the crops, and who sincerely believe they can change the climate if they could change the Government. We have a few of those wiseacres of society who assume to possess a monopoly of foresight, and who, like Caius Caligula, think the world would have been better made could they have been consulted. But these people no more represent the convictions of Canadians than O'Donovan Rossa, or your fire-eating politicians and papers represent those of true Americans. I have no desire to hurt anybody's feelings here, but I hope I may be allowed to say something to remove the infatuation too prevalent in the States that Canada favors annexation.

Were we to judge you as you judge us—by the vamping of the croakers, what value could we put upon your union, and would we not feel like agreeing with Rossiter Johnson, who in his "Short History of the War of Secession," just published in Boston, thinks he sees in certain national circumstances the threatening elements of a second civil war? For years before the last civil war you had fire-eaters, whose arrogance and vanity knew no bounds; who were advised by the Canadian press to study the elements of discord in the South instead of hankering for new ones in the North. It was just the same when years before that Georgia and Carolina appealed to arms and defied the general Government. Surely two threatened disruptions and one terrible civil war in the history of a century should be enough. But last Fourth of July I was near enough the "Reunion of the North and South" on the battlefield of Gettysburg, to see the ex-Confederates wearing the starred and

barred badge, with the inscription upon it, "This was the flag of treason and rebellion in 1861, and it is the flag of treason and rebellion in 1888." I read the protests of General Wagner, General Gobin and the Quartermaster-General of the Grand Army of the Republic against the gush and glorification of the rebels because they had been rebels. I heard one officer boast that Southern privateers had destroyed \$500,000,000 of your property, and had driven a quarter of a million tons of your shipping to make transfer to the British flag. I heard another gloat over the fact that they had nearly captured Philadelphia. I heard scores declare that they had not been beaten but starved. Reflecting upon all this, and hearing at this very hour the discordant echoes from that quarter, it strikes me that if senators like Mr. Blaine are sincere in their effusive professions of patriotism, they could find a good deal to monopolize their genius down there in Dixie without meddling in the politics or the future of Canada. Canada minds its own business, and does not worry itself over yours, though you have coddled and dry-nursed her enemies, and when she was at peace with you, allowed a horde of your citizens to invade her. Frankly, I may say that while I believe Canada

HAS BEEN A FAIR NEIGHBOR too often she had not found her cousin one. If for once in the Treaty of Washington, remembering Main, Oregon and San Juan, she did not let your diplomatists get the better of her, she felt that she had given you at least a reasonable *quid pro quo*. During the civil war we allowed your armed troops to cross from Detroit to Niagara on Canadian territory on the Great Western Railway; but during the Red River rebellion in 1869, your Government refused leave to one of our vessels to go up the Sault Ste. Marie Canal, and arms and ammunition were transhipped at considerable delay. When the St. Albans raiders, unknown to us,

entered your territory from Canada, your Government was asked for its bill of damages, and it was paid. When the Alabama claims bill was presented, it was paid so well that years after every possible claim was settled, your Government retains a large balance, which should have been refunded to Britain! What about the damages done to Canada in Canada by your citizens during the Fenian raids, most of them wearing the uniform of branches of your national troops? Not a cent has been paid. You expected Canada to know that a few quiet and straggling Southerners intended to raid St. Albans; you thought that England should have known that a solitary cruiser intended leaving one of her ports to prey upon your commerce. But what a splendid display of reciprocal consistency, that thousands of armed men should openly muster and drill in your chief cities for months before; openly occupy your border towns and villages, and attempt to invade us, and your Government comparatively oblivious! In the face of these facts, it is not easy to swallow the statements or believe in the honesty of public men who talk of the exactions and encroachments of a people of 6,000,000 upon a people of 60,000,000.

CANADA CANNOT BE COERCED

or forced into union with such examples of political hypocrisy. There was a time, twenty years ago, when we were disconnected provinces; when Canada proper contained only 370,488 square miles; when we had few railways; when stagnation seemed to mark us; when we had no winter outlet of our own to the sea; when our great Northwest was a great unknown. Even then annexation was unpopular. There had not been enough accomplished then by Canadian statesmen to make their rivals envious, and your own statesmen did not dream that we could build a railway to connect the Maritime and the old Provinces, or that with a population of

only 5,000,000, we would dare to span the continent with another, a work not accomplished by the States until they had 50,000,000. But can you be deceived into the belief that confederated Canada is now for sale, when since confederation, twenty years ago, our revenue or consolidated fund has immensely increased; when our shipping and its tonnage has more than doubled—young Canada standing fifth on the list of nations having more vessels than old France, Spain, Italy or Russia; when the assets of our chartered banks, the value of our imports, the extent of our exports tell a story of our marvelous progress; when, instead of about 2,000 miles of railway in 1867, we have now over 14,000, giving us a greater mileage than any other part of the Empire, excepting the United Kingdom and India; when the Canadian Pacific Railway has established a line of steamers between Vancouver and Hong Kong and Japan, and our great Canadian line has become of Imperial importance; when we have developed our inexhaustible fisheries, thanks to your abrogation of the Reciprocity Treaty, so that we have 75,000 hardy men sailing our vessels and otherwise engaged in the business, and for 1887 we valued those fisheries at \$20,000,000! Can you wonder that annexation, as a serious subject, has received its doom, and that in spite of the intoxication of senatorial conceit on the one side, and the croaking of malcontents and political tramps on the other, Canada is loyal to the Mother Country, from whose stout old loins both of us sprang? Confederated Canada, respected Canada, loyal Canada, progressive Canada, is a personal and political insult to the sorehead parties who opposed Confederation, and who would welcome

ANNEXATION TO TURKEY OR RUSSIA

were we neighbors, or rejoice even at annihilation rather than live the agonizing life of seeing their prospects and

prediction destroyed. There were millions of your own citizens glad to do their worst to dismember your union; there were thousands who gave their lives to wreck the Republic that their own State interests might be promoted. Yet when a few obscure cranks in Canada declare in favor of annexation, you think they speak the sentiment of a sober people, who do not find it necessary to indulge in the spectacular or the rhetorical that you may see and hear the truth. You choose to ignore the treason of many a Southern newspaper today as you did twenty-five years ago, and you exalt as gospel the partisans of the Canadian press, who are incapable of telling the truth.

Personally and professionally, I am sure any dentist who visits you, forgets he is not an American, and I am sure we try to make Americans coming to Canada forget they are not Canadians. You have big and hospitable hearts that were intended for hospitality, and not for quarrel. Personally, and even commercially, we can find so many points of common agreement that we should overlook the few where we must agree to differ. Politically, I realize I am a foreigner here the moment I cross the line. I am at home when I land at Liverpool, at Glasgow, at Dublin, at Bermuda, New South Wales, Victoria, Queensland, New Guinea, Jamaica, Barbadoes or Trinidad. Politically, I have a share in, and am proud of, the glorious old flag which waves over New Zealand, Australia, Gibraltar, Malta, Hong Kong, West Africa, Ceylon, St. Helena, Natal, British Honduras, Dominica, the Bahamas, Grenada, Barbadoes, India. England is an old and apt master in annexation. Since she lost the thirteen colonies here, she has annexed colonies far greater in area and population of far more value to her than if they were joined to her three kingdoms, while Spain, Portugal, Holland and France have lost theirs, and there is little or nothing left for any other nation to annex. I need no other

political passport to the rights of a British subject, and the citizen of a great realm comprising sixty-five territories and islands, than my Canadian birthright. I do not measure my national boundary from the Atlantic to the Pacific, but from the Pacific to the Caribbean Sea.

UNDER THE REIGN OF VICTORIA

no Canadian need be ashamed to belong to an Empire which embraces a fifth of the habitable globe, and to know that his own Dominion forms nearly a half of the whole; an Empire five times as large as that which was under Darius; four times the size of that under ancient Rome; forty times greater than United Germany; three times larger than the United States, Australia alone nearly as big as the States; India nearly a million and a quarter of square miles; Canada, 600,000 square miles larger than the States, without Alaska, and 18,000 square miles larger with it! An Empire nearly nine million of square miles, with a population of 301,000,000. Shares in such a realm; heirs to such vast and varied privileges, Canadians are not for sale. Political annexation must then remain a bugaboo for disappointed politicians on our side to play with, and a bubble for certain senators on this side to blow to decoy their innocent fanatics at home. But there is an annexation we favor, that of brotherly friendship and political good-will. You have 55,000,000 the start of us. Are you the Goliath, afraid of Canada as a political David? Canada has been a fair neighbor. When Lincoln and Garfield died, the Dominion was in mourning. Whenever any of your men-of-war come into our ports, the citizens rejoice, and give their men the hospitalities of the cities. There are constant reciprocity treaties being made every day in the year between us at the altar of Hymen. At many of our banquets the toast of the President fol-

lows that to the Queen. At most of our public gatherings your flag entwines ours. From most of our pulpits prayers are offered for your ruler as well as ours. That is the sort of alliance we do more than you do to promote. We want, too, fair commercial reciprocity, but we shall not take commercial union for it, or bend our necks or

our knees for either. Whatever be-tides, we can both be loyal to our own political countries; we can both be fair, even to our own national and natural prejudices, and while Canadians may neighborly pray "God bless the Republic," may you not in as friendly a spirit reciprocate with "God Save the Queen."

A Part of the Proceedings of the First Meeting of the Ontario Dental Association, 1868

BY J. B. MEACHAM, L.D.S., ASSIST. RECORD. SEC'Y., BRANTFORD, ONT.

*St. Lawrence Hall, Toronto,
Jan. 21st, 1868.*

PRESENT.—B. W. Day, M.D., President; J. Stuart Scott, M.D., Recording Secretary; J. O'Donnell, Corresponding Secretary; W. C. Adams, Toronto; J. Bowes, Ingersoll; D. A. Bogart, Hamilton; C. S. Chittenden, Hamilton; S. B. Chandler, New Castle; W. H. Caid, Whitby; F. G. Callender, Cobourg; T. J. Jones, Bowmanville; Chas. Kahn, Stratford; A. D. Lalonde, Brockville; L. Lemon, St. Catharines; D. Pentland, Peterboro; Robt. Reid, Galt; M. E. Snider, Toronto; R. Trotter, Brampton; H. T. Wood, Picton; *Incipient Members.* — T. Nerlands, Port Hope; L. Van Camp, Berlin. *Visitors.*—B. T. Whitney, M.D., Buffalo, N.Y.; A. M. Roseburgh, M.D., as Delegate from the Medical Alumni Association of Victoria University. Dr. Dewar, member of the Medical Council of Ontario; Dr. G. W. Boulter, M.P.P. *Honorary Member.*—Prof. C. V. Berryman, M.A., M.D., member of the Medical Council of Ontario, and others, including a large number of applicants for membership.

J. S. Scott, M.D., moved, seconded by C. S. Chittenden, that the minutes as printed and distributed to members

be adopted. Carried.

C. S. Chittenden moved, seconded by J. O'Donnell, that B. T. Whitney, of Buffalo, N.Y., be elected an Honorary Member of this Association. Carried.

J. O'Donnell, Corresponding Secretary, read letters from M. M. Johnston, B.A., New York, and from the Managers of several railways.

The President read his annual address. Referred to Committee to consist of H. T. Wood, F. G. Callender, and J. Stuart Scott, M.D.

J. O'Donnell moved, seconded by R. Trotter, that Act 8 of constitution be suspended, and that Dentists present be allowed to hand in their Credentials. Carried.

J. O'Donnell moved, seconded by J. Bowes, that the following members be a Committee to take into consideration the Bill already printed and report tomorrow at 3 o'clock, the President, the Secretaries, Messrs. Chittenden, Wood, Trotter, Reid, Callender and Adams. Carried.

On motion of C. S. Chittenden, seconded by J. B. Meacham, the Bill was then read without discussion.

Adjourned to meet at 2 p.m., tomorrow.

SECOND DAY

*St. Lawrence Hall, Toronto,
Jan. 22nd, 1868.*

PRESENT.—B. W. Day, M.D., President, in the chair; J. Stuart Scott, M.D., and J. B. Meacham, Secretaries, and a full attendance of members and applicants for membership.

J. O'Donnell presented the first report of Committee on Credentials, recommending the following Dentists as worthy of membership: W. E. Hughes, L. Clements, J. B. Wilmott, J. C. McConslan, M. P. Whipple, W. H. Branscombe, E. D. Greene, J. H.

Bryant, balloted for and elected.

For Incipient Members: J. H. Padfield, E. D. Green, A. Burns, H. G. Weagant, R. G. Trotter, R. W. Comer, J. E. Huntingdon, R. S. Brown, balloted for and elected.

C. S. Chittenden moved, seconded by M. E. Snider, that the following Dentists be balloted for, notwithstanding their applications are incomplete. Carried. Namely: J. Zimmerman, H. McLaren, H. Meyers, L. Wills, J. Peck, elected. L. Van Camp and J. M. Branscombe, incipient members, were elected as active members.

Amalgam and Mercurial Poisoning

The St. John Telegraph Journal publishes the following rejoinder to a former article on "That Body of Yours."

"In Monday morning's Telegraph-Journal under the heading 'That Body of Yours,' there appears a very misleading statement that mercuric poisoning sometimes results from amalgam fillings. It seems strange that an intelligent medical man should fall for such an unsubstantial claim. Time and again this bugbear crops up; the ridiculous query is made; it grows in some half-intelligent mind into a statement; it receives credence and is swallowed as actual truth.

"I know not what part of Europe this strange emanation has come from (if the name of the investigator with the location of the institution wherein the supposed investigation has taken place were announced, one could quickly nail the false assumption), but if any one has symptoms of mercurial poisoning resulting from amalgam fillings he must have an inordinate amount of the most sloppy kind of amalgam treatment possible. Ordinary amalgam (that is silver amalgam) fillings in 25 years' test no appreciable diminution in their mercurial content.

When actual tests demonstrate that the amount of mercury lost can scarcely be detected in careful laboratory research work it requires a long stretch of imagination to agree that such symptoms as the article refers to can possibly exist.

"It is true that sometimes copper amalgam, a highly antiseptic material for certain conditions of carious teeth, for some reasons in some few cases, disintegrates and dissolves from a cavity into which it has been inserted and in a mouth where an excessive quantity of this material was placed one might conceive of symptoms of mercurial poisoning resulting, but the thing is so far-fetched that it is really ludicrous.

"One person in 100 may exhibit a wasting away of such material but you can scarcely imagine a whole group of workers simultaneously afflicted. I am quite confident that the article referred to will result in every dental surgeon receiving inquiries regarding the validity of the statement and certain imaginative persons will be able to develop some of the symptoms mentioned, but my intention is to refute the suggestion that ordinary amalgam restoration can possibly cause any symptoms of mercurial poisoning."

Western Canada Territorial Dental History

W. D. COWAN, D.D.S., REGINA, ASSOCIATE EDITOR, D.D.J.

All the books and papers of the Association as well as a full and complete financial statement of the affairs of the Association. All accounts and expenditures for the past 12 years were placed before the members and carefully examined by them.

The revenue\$1,912.00

Expenses\$1,881.43

Balance on hand 30.57

The time being 12 o'clock the meeting adjourned until 1.30 p.m.

The election of officers was then proceeded with, Dr. B. C. McClure of Lethbridge, was elected president. Dr. Holbrook of Calgary, vice-president. Dr. Size was re-elected Sect'y. Treasurer. The next issue of the "Leader" contained a column and a half from Hon. H. H. V. Bulyea. This I quote in full as it reflects the whole government side of the controversy up to that time. It read:

A REPLY TO DR. COWAN

*The Territorial Secretary Points Out
Incorrect Statements Made to Dental
Association*

Mr. Bulyea, the Territorial Secretary, smiled calmly when a "Leader" reporter asked him one day last week if his attention had been directed to the published reports of the Dental Association in Regina recently. "Oh, yes," he replied. "I hope the doctor did not say all the things credited to him in the report." Upon being assured that the various statements in the local papers gave a fairly correct account of the proceedings, Mr. Bulyea remarked that Dr. Cowan seemed to have given a freer rein to his imagination than usual. "As a matter of

fact there was not a single statement he made that did not garble and twist the truth. I would not like to say that it was done intentionally or with malice aforethought, as the lawyers say, but every one who knows Dr. Cowan, knows how apt he is allow his personal desires to loom up so large in his mind's eye that they grow to appear to him to be actual occurrences."

On being asked if he would give the "Leader" the Government's version of the charges made, Mr. Bulyea said that the full story was a longer one than the public would care to read. But the present ill feeling and spleen on the part of Dr. Cowan arose simply from the fact that the Government insisted that the Dental Association should comply, in letter and spirit with the law under which it existed. The Ordinance provides for the admission upon the register of the Association of graduates of reputable American dental colleges who put their students through three years' course of lectures and practice. Everybody but Dr. Cowan seems to know that a year's course at any college is never twelve months long, but varies in length from six to seven months and upwards. It has been a habit of Dr. Cowan to attempt to discourage dentists from outside points from coming here. Where such advice had no effect. Drs. Cowan and Size, president and secretary of the Association, would refuse to admit undoubtedly qualified dentists upon the register, in the expectation of turning their attention to some other field, where they would not enter into opposition to them.

"I do not think," said Mr. Bulyea, "that I need do any more than say that Dr. Pollard of Regina, was kept out for months until he took advantage of the privilege given him by the law and appealed against the refusal of Dr. Cowan to enter his name upon the register of the Association, because he could not comply with the unreasonable and illegal demand that he should produce a certificate from his college that he had spent 36 months there in acquiring his profession. Dr. Cowan need not attempt to tell any one in this country that such dentists as Dr. Pollard of Regina, Dr. Giaser of Moose Jaw, Dr. Coleridge or Dr. McKee of Medicine Hat, or Dr. Mara of Calgary, are not quite as well qualified practitioners as he is himself. All these men named were refused admittance into the Association upon the one ground that they did not produce evidence that they had spent 36 months at college, but as they were able to show they complied with the law by producing diplomas and certificates required by the Ordinance the Government ordered their registration."

Turning over the pages of a local newspaper, Mr. Bulyea read from an advertisement "W. D. Cowan, Surgeon Dentist. Graduate of the oldest dental college in the world." "That shows the absurdity of Dr. Cowan's attitude," said Dr. Bulyea. "He is a graduate of Baltimore College himself; it is evident the one thing upon which he most prides himself professionally. It is his American diploma upon which he calls himself doctor; and yet nothing is too bad or untruthful for him to say respecting the qualifications of other American Dentists. The fact is plain, Dr. Cowan and his friends wanted to make a close corporation of their Association and to keep these Territories as a preserve for themselves, which, of course, in the public interest, could not be allowed, and hence these tears."

"To show you to what length the gentleman was prepared to go to attain

his ends, let me read to you an extract from a letter he wrote as president of the Dental Association to a dentist in Ontario. It is as follows:

"Just one word of caution. It is none of my business where you go but as a number of dentists have come into the Territories and gone out of them sadder but wiser men, I deem it my duty to warn you not to go to any great expense until you know where you are going. There is not an opening in the Territories. Three times as many dentists here per population as in Ontario. Extracting 25c, fillings 50c, and gold fillings \$1.00. That is what you are up against'."

"There is no use to comment on these figures as anyone knows who has had to secure the services of a dentist that the charges usually exacted are two or three times these figures."

"That was a fine little story the doctor attempted to gull the strangers with respecting the unwarranted—and, of course, political—interference of the Legislature in the case of young Mr. Neff, of Moosomin," continued Mr. Bulyea. "He could not have expected that to be reported or he would have been more careful. The amendment to the law which Dr. Cowan states was introduced into the Assembly by Mr. J. R. Neff, the uncle of the gentleman referred to, and which Dr. Cowan further stated was introduced by Mr. Neff as a member of the Government for the express purpose of forcing his nephew into the Association, was not introduced until the session of 1900. Now, everyone who takes even the one-sided interest in public affairs that Dr. Cowan does, should know that Mr. J. R. Neff has not been a member of the Assembly since 1898, and that for some time before that date he had not been a member of the Executive Committee, as the Government was then called."

"Then, again, Dr. Cowan was far astray from the truth in his statements respecting the Consolidation

Commission. The doctor did not learn it all at school, for there are some things yet in the world that he cannot claim to run. I doubt if he could ever understand the matter, and I do not propose to waste any time in an attempt to teach him even the rudiments of legislative methods; but you can take it from me that everything that was done by the Consolidation Commission was done carefully, properly and with the fullest authority. I need only state that the Commission was composed of Judge Richardson, Judge Wetmore and Mr. C. C. McCaul, K.C., three of the ablest lawyers in the Territories, to dispose of anything Dr. Cowan may have to say with respect to their work."

Mr. Bulyea further said that he would not attempt to set Dr. Cowan right in all his vagaries, but he would say that there was not a word of truth in the statement that the Government had interfered in any way in the cases of two dentists named Hayes and Marshall. "This is the first time I have ever heard their names mentioned in this connection," he said. "Then again Dr. Cowan does not seem to understand that the action of the Assembly in removing the clause from the Ordinance which provided for the imposition of a money penalty for infractions of its provisions simply made the punishment stronger—to fit the crime, so to speak. Instead of a mere fine a person practising dentistry without a certificate from 1893 to 1897 was liable to indictment and punishable with a year's imprisonment without the option of a fine. And yet the doctor makes the ridiculous statement that this action demoralized the Association and weakened its efforts to prevent the deception of the public.

"It is interesting to learn," continued Mr. Bulyea, "that the draft Bill which Dr. Cowan went to so much trouble to prepare and have printed

was refused introduction. No member of the Government, nor, so far as I know, any member of the House supporting the Government, was asked to introduce the Bill, so that the refusal must have come from the members of the Opposition. The doctor even took the trouble to submit his Bill to Mr. Haultain for his inspection with a view, I suppose, of enlisting his sympathies for the measure. Mr. Haultain had his own Bill in contemplation, that which he introduced and which was afterwards passed; but no suggestion was made to him that he should father the doctor's little Bill. But, perhaps, there was no refusal at all," concluded Mr. Bulyea, "it may only be another case of imagination. If the reported utterances were made by Dr. Cowan in his private capacity it would not be necessary here where he is so well known to refer to them but as he is reported as the legal representative of the Dominion Council a certain amount of weight might be given to the statements in outside quarters."

This, of course, could not be allowed to pass unchallenged, so I engaged the whole front page of the Standard for reply. I quote this in full because it reflects the whole case from the viewpoint of the Dental Association. It read,—

DR. COWAN'S REPLY

To the Editor of The Standard.

Sir:—I ask space to reply to an interview on dental subjects had with Hon. G. H. V. Bulyea and reported in last week's Leader. I was pleased to see the Government continue the discussion commenced at the investigation they ordered, because unlike most "close corporations" as Mr. Bulyea terms us, publicity is what we desire; knowing that our case is so complete that we have but to appeal to the people to be endorsed.

(To be Continued next issue)

SOCIETIES

Graduates in Dentistry, University of Toronto

Stuart Robert Adam, Murray Gilmour Bond, Leonard Roy Braden, Arthur Frederick Brookes, William Drummond Bryce, John Carroll, Ralph Edward Carroll, George William Cornell, Albert Henry Demuth, Herbert Earl Dobbie, John Cameron Egan, Edward MacKenzie Fisher, Richard Frederick Flach, Clifford Howard Garbutt, Gerald Harry Gardner, Wilmer Nelson Geddes, James Gordon Glascott, Thomas Clarke Griffith, Samuel Jack Hellen, Roy Gordon Hemmerich, Karl Weafer Hettenhausen, Sydney Walter Holt, George Orrin Hutchison, Bernard

Johnson, Donald McCready Kennedy, Oliver Sproule Kerr, Benjamin Keyfetz, Frank Albert Kohli, Cornelius Forsythe Krieghoff, Julius Landau, Victor Miller Lloyd, Harry Ross Loucks, John Murray McCaffery, Kenneth Halliday MacKay, Thomas Earl McLaughlin, Richard Merlin McQueen, Vincent Cleary McSloy, Helen Jewell Manchester, Allan Ross Montgomery, Roy Harold O'Neill, Kenneth McKenzie Phillips, Ivan George Garland Polack, Wilfred Albert Potter, Murvin John Quigley, Archibald Rabinovitch, William Harry Ridge.

The Dental Society of Western Canada, House of Delegates

The House of Delegates of the Dental Society of Western Canada met on the day preceding the convention in Edmonton, which began May 25th. The Prairie Provinces reported a full quota of ten each.

The election of officers placed the following men in the executive positions.

Dr. Geo. Cameron, Swift Current, Pres.; Dr. Harry Garvin, Winnipeg, 1st Vice-Pres.; Dr. Leslie McIntyre, Edmonton, 2nd Vice-Pres.; Dr. J. D. LaFasken, Regina, Secy.; Dr. Jas. Brimacombe, Weyburn, Treas.

The place of meeting for 1929 was given to Regina, several telegrams from Regina organizations to that effect having been received.

The Dental Society of Western Canada has just terminated its first meeting with the three Provinces participating. The MacDonald Hotel, Edmonton, housed most of the visitors but it couldn't quite accommodate them all.

Registration showed about 165 dentists with many ladies present. Dr. E. M. Doyle, the President started the sessions by introducing the Hon. Geo. Hoadley, Minister of Health for Alberta. Mr. Hoadley outlined some of his plans for Dental Health Service to the people of Alberta and reiterated his belief that dentistry to a great extent held the health of the populace in its keeping.

Five visitors took part in the main

programme. Dr. Fred Conboy, Dr. Fred Molt and Dr. Gillis, Dr. W. I. Ferrier and Dr. Jones. Dr. Molt took up mouth preparation and X-Ray work; Dr. Gillis went over full denture prosthesis; Drs. Ferrier and Jones put on excellent clinics in gold foil; while Dr. Conboy gave work on dental practice building and management.

West Clinicians gave a series of progressive table clinics on an extremely good variety of subjects related to everyday dentists and put them over in excellent style. Their work was as follows.

1.30 to 5.30 p.m.—Progressive half hour Clinics (Upstairs on third floor).

Clinic No. 1—"Porcelain Restorations," Dr. P. S. LaFleche, Winnipeg.

Clinic No. 2—"Rebasing Dentures," Dr. R. H. McDougall, Moose Jaw.

Clinic No. 3—"X-Ray Diagnosis," Dr. C. H. Vroman, Winnipeg.

Clinic No. 4—"Porcelain Jacket Crowns," Dr. Ernest Kennedy, Banff. "Selected"—Dr. W. A. Piper, Calgary.

Clinic No. 5—"Vincent's Infection" (Microscopic), Dr. M. H. Garvin, Winnipeg. "Office Records," Dr. Kenneth M. Johnson, Winnipeg.

Clinic No. 6—"Orthodontia Problems," Dr. Manly Bowles, Winnipeg. "Orthodontia half round Pin and Tube Appliance for Simple Cases," Dr. J. G. Pullar, Calgary.

Clinic No. 7—"Impressions" (Table Clinic), Dr. Harry Gilchrist, Edmonton. "Something New in Denture Construction," Dr. H. M. Landing, Edmonton.

Clinic No. 8—"Gold Inlay Technique," Dr. R. R. McIntyre, Calgary.

1.30 — Progressive half hour Clinics (Upstairs on third floor).

Clinic No. 1—"Gold Foil Technique," Dr. W. I. Ferrier, Seattle; Dr. E. M. Jones, Burlington, Wash.

Clinic No. 2—"Impression Taking" full cases, Dr. L. V. Janes, Edmonton.

Clinic No. 3—"Impression Taking" partial cases. Dr. Jas. Carmichael, Edmonton.

Clinic No. 4—"Jackson's Orthodontia Appliances," Dr. Waldo Murray, Camrose.

Clinic No. 5—"Some Suggestions in Difficult Extractions and Local Anaesthesia," Dr. T. O. Forsythe, Winnipeg.

Clinic No. 6—"Harper's Amalgam Technique," Saskatoon Study Group.

Clinic No. 7—"Something Practical in Crown and Bridge Work," Dr. P. G. Atkinson, Calgary.

Clinic No. 8—"Analgesia in Preparing Gingival Cavities," Dr. J. W. Clay and Dr. J. M. Dixon, Calgary.

The golf tournament resulted in Dr. P. G. Atkinson, of Calgary, winning the Western Canada Championship prize of a gold medallion presented by the Edmonton Dental Secretary and Dr. Lee R. Dodds, securing the Alberta championship with cup and medal presented by the Ash Temple Co.

Mrs. Jas. Carmichael proved to be a real find in organizing the ladies entertainment. She took complete charge of this work and left the Edmonton men free to handle the work of the convention proper. Teas, drives, bridge, golf and dances kept the ladies busy.

A banquet, mixed and informal, followed by a dance wound up an extremely pleasant and profitable meeting and augurs well for the future of the Dental Society of Western Canada.

The Canadian hygiene council aims to take care of the teeth of the new arrivals in Canada. Dr. H. S. Thompson has already visited the port of entry to examine into and study the condition of the mouths of the new comers into Canada.

Graduates in Dentistry, Alberta University

The closing ceremonies in connection with the graduating classes in Alberta University took place in Edmonton last week. Unique among them was the conferring of the D. D. S. degree on the first class to graduate in dentistry from that institution. Those entering the profession were Dr. A. C. Ahrens, Dr. J. Burstein, Dr. W. P. Calhoun, Dr. J. Gerrie, Dr. L. E. Smith, Dr. G. D. Sutherland, and Dr. E. Wilkinson.

These young men have proven themselves bright, earnest students and it is to be hoped that they will succeed in their profession.

1911 "D" J. Menzies Campbell, D.D.S., (Toronto), L.D.S. (Ontario), L.D.S. (Glasgow), F.R.S.E., who practises at 14 Buckingham Terrace, Glasgow, W.2, has been elected a Fellow of the Royal Society of Medicine, and a member of the section of Odontology.

Eastern Ontario Dental Association

The Fiftieth Annual Convention of the Eastern Ontario Dental Association will be held at Stanley Island, Cornwall, on Wednesday evening, Thursday and Friday, June 22nd, 23rd and 24th.

The program Committee have worked hard endeavoring to make this meeting the best in its history, and we are making an appeal to you to assist us by your presence, to celebrate our Golden Jubilee.

We have been fortunate in securing such men as Doctors Webster, Clarkson, Kreuger, Nolin, MacLachlan and Coupland, who have graciously consented to assist us by giving papers or clinics and we are therefore anxious for a bumper attendance.

A very interesting feature of our convention this year will be the Thursday evening meeting which will take the form of a dinner at which Canon Chatford of Montreal,

a most eloquent speaker, will deliver an address. The balance of the evening will be given over to a musical program and dancing.

Aside from the dental program, there will be ample opportunity for enjoyment at such sports as fishing, boating and golf; a tournament is being arranged for Friday afternoon.

We have not forgotten to include entertainment for the ladies and hope you will arrange to have your wife, your daughter, sweetheart or mother come along for the holiday and outing.

Mark off these dates in your appointment book and come to Stanley Island on June 22nd, 23rd and 24th.

A full program will reach you in a few days. Quite a number of exhibitors have expressed their intention of coming.

Yours on behalf of the Program Committee — W. C. Macartney.

OFFICERS OF THE BRITISH COLUMBIA DENTAL ASSOCIATION

Dr. F. T. Coughlan, of Vancouver, was chosen president of the British Columbia Dental Association during the business meeting; Dr. A. Brighthouse, Vancouver, president-elect; and Dr. E. Fraser Allan, Vancouver, secretary-treasurer. Dr. W. J. Bruce, Vancouver, was named chairman of the board of censors, consisting of Dr. F. Smith, New Westminster, and Dr. H. Cline, Vancouver.

Reports read before the gathering showed that there were 305 members. The association is in a strong financial position. Vancouver was chosen as the next convention town.

Dr. Bruce was appointed delegate to the Pacific Coast Dental conference, and Dr. Emery Jones delegate to the Toronto convention, taking place from May 16 to 19. Thanks were extended to the Victoria dentists by the past president, Dr. W. N. Gunning, for the success of the convention here. The balance of the evening programme was taken up by Doctors W. J. Lee and R. L. Pallen, both of Vancouver.

OFFICERS OF ONTARIO, DURHAM AND NORTHUMBERLAND DENTAL SOCIETY

Dr. H. J. Hudson, Whitby, was elected president of the Ontario-Durham Northumberland Dental Society, at its quarterly meeting held in Welch's Parlors, Oshawa, with a large attendance of dental men from three counties. Other officers are: Vice-president, Dr. Trewin, Oshawa; secretary-treasurer, Dr. Beaton, Whitby; executive, Dr. McKenzie, Port Hope; Dr. Drurie, Cobourg; Dr. Lundy, Port Perry.

OFFICERS OF THE CANADIAN DENTAL ASSOCIATION

Honorary president, Dr. G. K. Thomson, Halifax; president, Dr. J. W. Clay, Calgary; first vice-president, Dr. F. J. Conboy, Toronto; second vice-president, Dr. M. H. Garvin, Winnipeg;

secretary-treasurer, Dr. J. Stanley Bagnall, Halifax.

OFFICERS OF THE BOARD OF DIRECTORS OF THE ROYAL COLLEGE OF DENTAL SURGEONS OF ONTARIO

The Board of Directors of the Royal College of Dental Surgeons is in annual session. The following are in attendance: Drs. S. S. Davidon, Ottawa; H. Irvine, Lindsay; J. A. Shannon, Sault Ste. Marie; R. Gordon McLean, Toronto; A. D. A. Mason, Toronto; W. G. Thompson, Hamilton; S. M. Kennedy, London; W. M. McGuire, Simcoe; G. H. Holmes, Owen Sound. The following officers were elected: President, R. Gordon McLean; Vice-President, S. S. Davidson; Registrar, S. M. Kennedy; Secretary-Treasurer, W. E. Willmott.

OFFICERS OF THE ACADEMY OF DENTISTRY, TORONTO

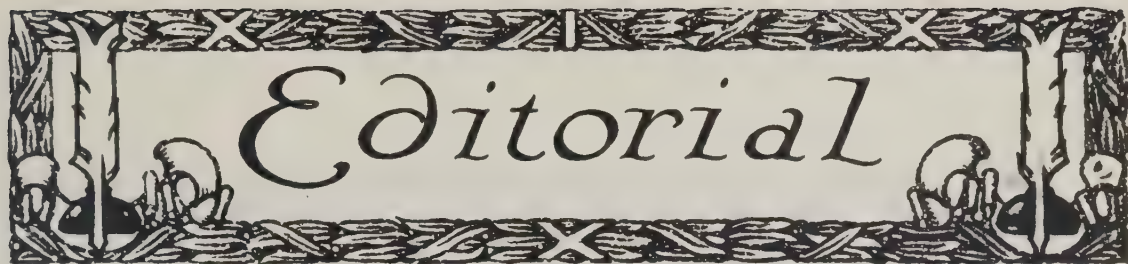
At the annual election of officers of the Academy of Dentistry held at the Dental College, Dr. R. S. Woolatt was elected president; Dr. H. D. Robb, past president; Dr. W. B. Amy, president-elect; Dr. T. E. C. Butler, treasurer, and Dr. A. M. Hord, secretary. The following were elected to council: Dr. T. Veitch, Dr. J. W. McDonald, Dr. F. Rusdon, Dr. K. Harris and Dr. D. L. Frawley.

CALGARY DENTAL SOCIETY OFFICERS

President, A. C. Steeves; first vice-president, Harvey Duncan; secretary-treasurer, C. B. Charles. Dr. V. Harold Macaulay is the retiring president.

OFFICERS OF THE DENTAL NURSES' ASSOCIATION

Past president, Miss F. G. Whitehead; president, Miss M. Chanonhouse; vice-president, Miss A. E. A. Aitken; recording secretary, Miss E. White; corresponding secretary, Miss M. Reid; treasurer, Miss R. Edmunds; social convener, Miss A. Lindsay.



Editorial

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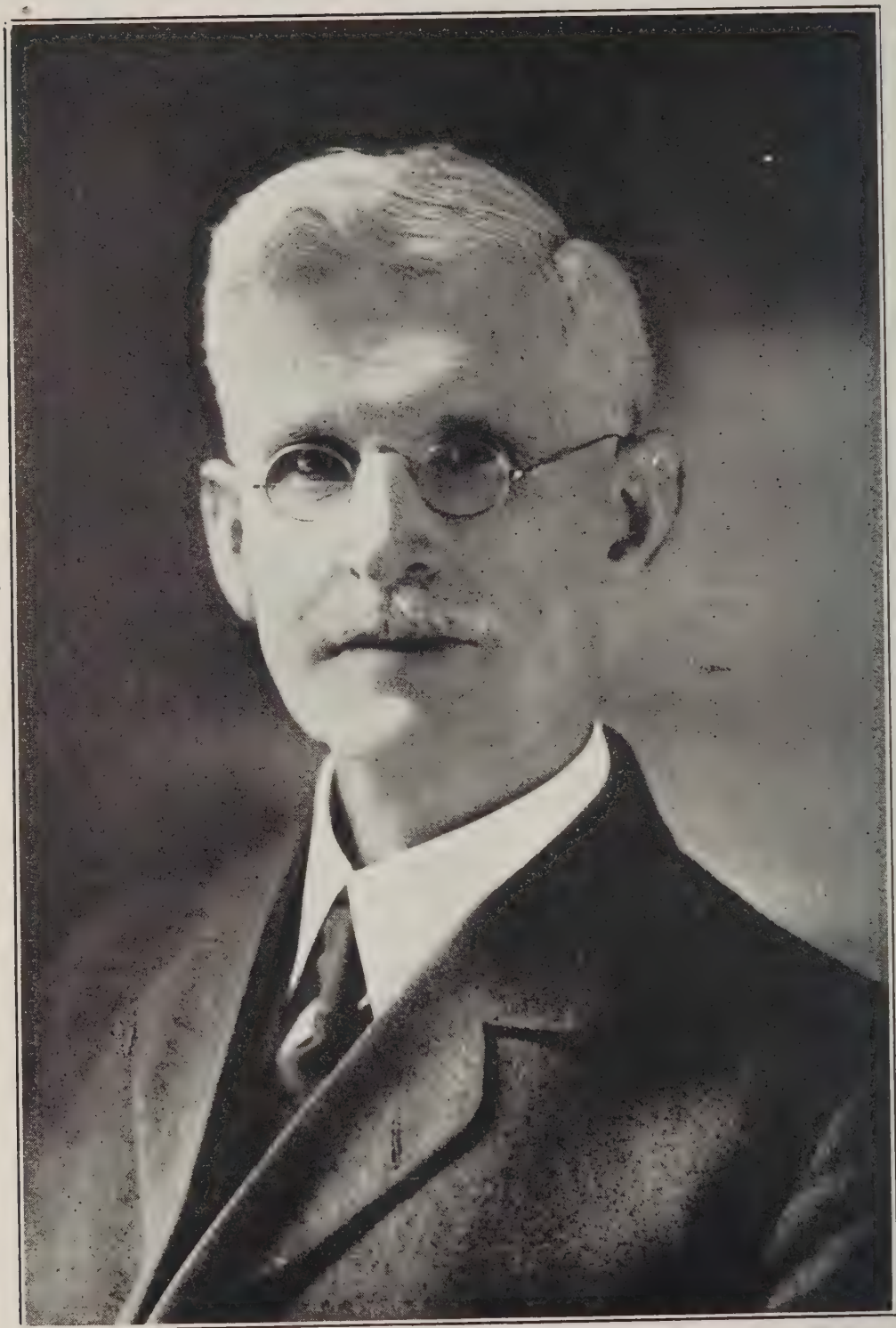
Vol. XXXIX

TORONTO, JUNE, 1927

No. 6

This Issue

It is fitting and proper that dentistry, like people and nations, should at certain periods take stock of their doings. This being the sixtieth anniversary of Canada's national birth and curiously enough the sixtieth anniversary of the birth of Canadian Dentistry, it is proper that we should make some mention of the fact. The Dental Acts of Ontario and Quebec were passed at the first meetings of the provincial legislatures. The first Canadian Dental Journal was issued about the same time by that wonderful citizen, sportsman, and dentist, W. George Beers, of Montreal. We celebrate this sixtieth anniversary of Canadian dental journalism by publishing a picture and a couple of characteristic articles by its founder, and a short history of dentistry prior to 1900. In this issue appears the last section of Dr. Cowan's history of dentistry in the Canadian Northwest Territories. Some years ago we published the early history of dentistry in New Brunswick by Dr. McIveney. We also present some pictures of the founders of Canadian dentistry. We regret that owing to the scarcity of copper metals during the war time, that many of the original cuts of our fathers of dental confederation were melted to make shells to present to the Germans. We especially regret the loss of cuts of many of those who took part in the formation of the Canadian Dental Association and the Dominion Dental Council. The history of official dentistry in this issue by Dr. W. E. Willmott is a real contribution to the history of dentistry in Canada.



Frank Woodbury, D.D.S., Halifax, N.S., a leader in his profession for almost half a century.

Doubtful Publicity

Temple University, Philadelphia, has announced a program of research to find a cure for pyorrhea and to determine the relation of diet to dental defects and defects to caries. The cure for pyorrhea has been publicly announced a score of times in as many years and so have the cures for cancer and rheumatism, and still Temple University goes on spending its time and money to discover a cure for a disease which the Toronto press has announced dozens of times. The local press does not confine itself to one cure, it has lots of them. Pyorrhea, like rheumatism, is a complex thing and is not likely to respond to one specific. It is enough to make one blush for shame to see the names of supposed scientists spoken of in black type in the same class with quacks and weather prophets. Temple University and all other universities who have the men and money are right in going ahead to investigate all infective problems about the mouth and teeth regardless of what the Toronto press has discovered. Such reports of cures in the press have a very discouraging effect on dental research. It makes dentistry look foolish to be asking for public and private help for dental research when the daily press are constantly attacking the names of the very men who are to do the research as having found *the cure*. No one is doing research on a cure for smallpox. The public reaction to the whole thing is, why spend money looking for a thing which has been found or the whole lot are unscientific and misguided and should not be trusted. Instead of such press publicity being a benefit to dentistry and the public it may be a real hindrance to progress.

A Questionable Practice Implied

We often hear the expression "The teeth should not be extracted until there is an impression made of them and the color or shade taken." The writer for some months was engaged where such was the practice. What the expression implies actually happened. Almost full sets of naturally colored teeth were extracted to make artificial dentures to take their places. It was in those days not uncommon to see twenty to thirty sound teeth removed because two or more teeth were discolored, irregular, decayed or paining. It would seem that we are returning to those days when we extracted teeth to make dentures except that we now extract teeth to make bridges and partial dentures. Instead of making crowns, bridges and dentures to replace lost teeth we take the teeth out to make a place for the artificial appliances. "*We have teeth to sell, all we need is a place to put them.*" As a rule a denture which needs to be extracted should be a poor example from which to take a model of form or color.

Notes

The Ontario Dental Association honored itself by electing Drs. C. N. Johnson and Don. H. Gallie, of Chicago, life members.

A press report hazarded the guess that a patient who was suffering pain following tooth extraction had lysol poisoning.

Dr. Mark G. McElhinney, of Ottawa, advocates a pension scheme for physicians and dentists. He suggests a plan similar to that of the civil service.

DENTAL NURSES

The annual reunion dinner of the Graduate Dental Nurses' Alumnae was held at the Walker House, May 19th, Miss Gertrude Whitehead, the retiring president, receiving the guests, assisted by Miss Mildred Shannonhouse, the president-elect. Miss Whitehead gave an interesting address on "Broader Organization," and vocal numbers were rendered by Mrs. Ellen Blogg, who sang "Garden of Happiness"; Miss Olive Miller, whose selection was "The Enchanted Glade," and Miss Beth Arnott Ellis, who was heard in a group of charming songs. Miss Jean M. Collins accompanied the artists at the piano, and between the courses the guests sang choruses. Miss Helen Love presented flowers to the retiring officers and candy to the artists and social convener, the recipients being Miss Gertrude Whitehead, Miss Eva Cutt, Miss Welda Leask, Miss Ann Lindsay, Mrs. Helen Blogg, Miss Olive Miller and Miss Beth Arnott Ellis. Miss Alta A. E. Aitken, vice-president, spoke a few words of appreciation of the work done by the retiring officers and hoped for their co-operation in the future. The nurses in training were guests of the alumnae.

A Dental Science Building is under construction in Montreal.

The Home and School Club of Birch Cliff, Scarboro, Ontario, voted \$50 towards dental service for indigent children.

Vancouver has a gold foil study club including Dr. F. O'Neill, Dr. J. E. Black, Dr. H. Cline, Dr. E. C. Jones, Dr. W. J. Hacking, Dr. W. K. Sproule and Dr. J. S. Bricker.

Among the oldest dentists now practising in Ontario may be mentioned Drs. Sparks, Kingston; Klotz, St. Catharines, and Neelands, Lindsay. These men were prominent figures at the recent Ontario and Canadian dental meetings.

The notion prevails among some official dentists in Canada that the Dominion Dental Council should be disbanded and a system of reciprocity among the provinces agreed to. Such an unstable and uncertain organization would surely be unsatisfactory to all concerned and especially to prospective candidates. Without regular meetings of provincial authorities from time to time there would be no way of gauging standards.

THE EASTERN ONTARIO DENTAL ASSOCIATION

The annual meeting of the Eastern Ontario Dental Association will hold its meeting at Stanley Island near Cornwall, June 22, 23, 24. The program is attractive with both local and outside talent. The social part of the program is good. Music, dancing, tennis, boating, bathing and golf. The hotel rate is very moderate and the accommodation good. Canon Allan, of Montreal, will speak at the dinner.

Dr. H. Baker is president of the Stratford Dental Society.

The duty against British dental supplies going into the United States is 60 per cent.

Preventive dentistry as applied to adults is a misnomer, if applied to children it has some meaning.

Sixty-three per cent. of the public school children of Toronto required dental attention in 1926. 75,000 were examined.

There is a general distaste in an Englishman's mind to having his children examined by physicians, dentists and others.

Clarence Morrison, a dental student from Sydney, N. S., attending Harvard University, was awarded a scholarship of \$125.00.

The many friends of Dr. A. J. McDonagh will be glad to know he has recovered from a rather severe infection of his hand.

Dr. W. J. Lee, addressing the Dental Convention at Vancouver, said that decay of the teeth was a controllable disease by diet alone.

The dentists of St. John gave two hours each morning to the care of children's teeth at the health centre for the past two years. This year the department of health has employed the part time services of a dentist. They saw the light.

The ordinary books and writings on health always recommend outdoor exercise and fresh air. As if those who live such a life were never ill or needed no advice, help or treatment. It is the same old story, a single track mind. What cures one person surely should cure all others.

The opinion of many dentists is that yellow teeth are not so likely to decay as the pearly white ones.

The prisoners in the jails of Ontario are to receive dental attention under the direction of the government.

Dr. William Carson, Parry Sound, has been appointed first dental officer of the Northern Ontario free clinic service.

Physicians in Alberta are not allowed to practice restorative dentistry without passing an examination in such subjects as prescribed by Alberta University.

The Canadian Dental Association passed a resolution favoring the appointment of a dentist in each military district in Canada who will have charge of local affairs.

Four thousand garment workers in New York City have been treated annually in dental clinics established by the International Ladies' Garment Workers Union. Dr. George M. Price is in charge.

A parent of a child in the London, Ontario, schools brought action against a school dentist for maltreating his child in removing four deciduous teeth and filling one or two others. The action failed.

Professor O. Klotz who addressed the oral hygiene committee of the Ontario Dental Association, cautioned the members not to take for truth all that came from research laboratories until it had been tested in general practice.

Capt. Lindbergh, the now famous flyer, is a grandson of the late Dr. Charles H. Laud, of Detroit, who was born in Simcoe, Ontario. Dr. C. H. Laud was the discoverer of porcelain as now applied to dentistry for filling teeth.

A Winnipeg alderman calls medical and dental inspection of school children the frills of education.

If worry loosens the teeth as some dentists claim and dentists' bills cause worry, what's the answer?

A Montreal dentist has appealed against the ruling of the Dental Board which cancelled his license to practice in Quebec.

During the past fifteen years the medical profession of America has received \$276,000,000 of endowments for research, while dentistry has received \$15,000,000 for the same purpose and the same period. It cannot be expected that dentistry should make the same advances as in medicine.

A dinner party to celebrate the sixtieth anniversary of the birth of the Ontario Dental Association was held at Hart House. Among those present were W. D. Ross, Lieutenant-Governor of Ontario, Mrs. Ross, Sir Robert Falconer, Canon Cody, C. N. Johnson, D. M. Gallie, Dr. Ivey, and the officers of the Canadian and Ontario Associations.

DENTIST IDENTIFIES BODY BY WORK DONE ON TEETH

Canadian Press.

Montreal, Que., May 3.—The body of the woman dug up by workmen in a sand pit at St. Gregoire, Quebec, March 28, last, clothed in two sacks, was identified as that of Mrs. Charles Duranleau, of St. John's, Que., who was buried in a cemetery during the Spring of 1926. The identification was made by a dentist who examined the woman's teeth and satisfied the authorities that dental work performed before the woman died had been performed by him. The police believe that the body was removed from the cemetery by persons wanting it for purposes of study. When found it was enveloped in two sacks.

The officers of the I. O. D. E. of Nelson, B.C., asked the School Board for a dental clinic.

Dr. Frank G. Conklin, a graduate of the R. C. D. S., was recently elected president of the Chicago Dental Society. Dr. Conklin is a nephew of the Right Honourable George P. Graham.

Albert Minott, of Hamilton, was fined \$100 and costs for taking an impression of the mouth of a patient and making a set of artificial teeth for him. The magistrate held that if he had merely repaired a denture it would not be practising dentistry.

There were three hundred and five dentists attended the British Columbia Dental Association held at Victoria, April 22-23, 1927.

The annual meeting of the Dental Nurses' Alumnae Dental Association was held in Toronto during the meeting of the Canadian Dental Association.

FREE TRAVELLING CLINICS FOR THE NORTH

The proposal that a free travelling dental clinic shall be made available to the people of Northern Ontario is commendable. The Star hopes that the Ferguson government will act upon it at the earliest possible moment.

The health of the people of a community cannot be maintained if their teeth are neglected. Not a few of the sparsely settled districts of the northern hinterland are without medical and dental practitioners, a condition that produces hardships and tragedies.

A minister of the crown who arranges for travelling medical and dental clinics to operate in Northern Ontario will increase the happiness and improve the equipment for life of a considerable number of pioneers who deserve well of the country. He will have many rise up to call him blessed.

Your Theories, Doctor

Not Merely Ours, of what a Tooth
Paste Should Be—The Vital Claim
Made for Pepsodent

THE dental profession — not merely the Pepsodent Co.—has written the Pepsodent formula.

The makers of this product have only one opinion. That is, the dominant dental opinion of today. No private theories are permitted to contest the scientific findings of the profession itself.

Thus the sole claim made for Pepsodent is that it meets *in 9 important ways*, the exactness of TODAY, as outlined by leading dental opinion of TODAY, in a dentifrice.

Thus, too, the Pepsodent formula is ever undergoing development and advancement. The formula of today is different from five years ago. New discoveries, made in the dental field during that period, have

from time to time been embodied.

That means, as the profession has advanced, that Pepsodent has advanced with it. It means that as new discoveries come to light, and are proved correct by the leading practice of the day, they are immediately embodied in Pepsodent.

The object of Pepsodent is to remove the film—or mucin plaque—from the teeth in accord with modern dental opinion. To firm and give tonal quality to the gums in accord with the LATEST findings of science approved by the profession.

We believe that is the kind of dentifrice the profession wants. A full-size tube for trial will be gladly sent you on receipt of coupon.

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V-76, 191 George St., Toronto 2,
Ont., Canada.

Please send me, free of charge, one regular 50-cent size tube of Pepsodent, with literature and formula.

Name

Address

Enclose card or letterhead

2369 Can

A Winnipeg dentist has revived the ancient sport of riding a high bicycle (bone shaker).

The cost is too great for Oshawa, Ontario, to make a full establishment of a dental clinic.

Again we wish to compliment Dr. Copeland, a writer in the Daily Star of Toronto on health matters. He is giving some attention to the teeth of late.

The intention of the Ontario Government is to provide dental attention for all the inmates of the public institutions, such as hospitals, homes, jails, prisons, etc.

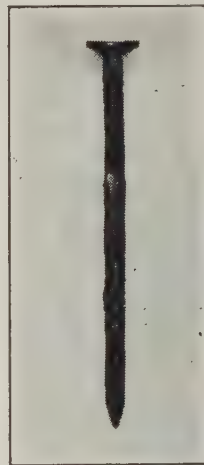
The city council of Hamilton asked the Board of Control to increase the salaries of the assisting dentists from \$1200 to \$1500. Drs. Thompson and Everett gave their services free of charge.

Dental convention speakers and reporters say that preventive dentistry is the most important question before the profession to-day. Will some of these men define the term and oblige the American Association of Dental Colleges.

EXAMINATION OF CHILDREN AT EXPENSE OF ROTARY CLUB, WEYBOURN

Its most notable achievement was the survey of school children in October, 1924, when more than 500 children received a thorough head-to-foot examination, medical, dental and X-ray. The results were carefully tabulated, partly for the assistance of doctors making similar surveys elsewhere, partly for convenience in follow-up work of the same kind locally. The club underwrote the cost of the clinic, so that an examination which in the ordinary course would cost from \$10 to \$20, cost the parents \$1.00 for each child examined.

A Mr. Newton, 158 Euclid Ave., Toronto, lather by trade, applied to the dental infirmary for dental treatment, April 30, 1927. A lower right



first molar was extracted by A. R. Montgomery. A lath nail was found imbedded in calculus at the gum line. The nail is shown full size. The soft tissues had bothered him for two years.

EASTMAN GIVES \$300,000 TO BRITISH DENTAL CLINIC

London, April 22.—George Eastman, of Rochester, N.Y., kodak manufacturer, will donate \$300,000, Lord Riddell announced to-day, for the establishment here of a dental clinic in the Royal Free Hospital. It is expected that the hospital will be opened in about two years. Dr. Henry Burkhart, head of Eastman's Rochester clinic, is in London now, Riddell said, making arrangements for the gift.

Another recognition of Dentistry as a branch of general Medicine is the fact that Accident & Sick Insurance companies accept a dentist's report as proof of claim by the assured. Dr. Arthur Day reports such a case with the Dominion of Canada Guarantee & Accident Co. The patient was allowed one week's sick insurance owing to the fact that he had teeth out and his appearance interfered with his work as a salesman.



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PATIENTS

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AN IMPRESSION

Mouth wide open,
 Chin atilt,
 Feeling cross
 When plaster is spilt;
 Wheel going round,
 An awful grind,
 Drilling for a nerve
 We're sure to find;
 Crick in my neck,
 Pain in my back;
 I'm getting old,
 Alas! Alack!

(Editor)—The above "plasteral" was written by one of Dr. J. F. Ross's patients while a second mix of plaster was made.

C. A. Burgess, B. A., D.D.S. of Moncton, N.B., graduated Mount Allison University with degree of Bachelor of Arts, 1922, McGill University, Doctor of Dental Surgery, 1925, 1 year with Rochester Dental Dispensary, Rochester, N.Y. 1 year with MacDowell County Dental Clinic, of Welch, W. Va., and dental department, Pocahontas Fruit Corporation of Pocahontas, Va. Settled in private practice in St. Stephen, N.B.

Dr. A. E. Webster,
 Toronto, Ontario.

Re editorial in April number "Dominion Dental Journal" on Specialists and Honor graduates.

Dr. Wm. A. Sandy
 DENTIST

Honor Graduate University of
 Toronto
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Can this bit of literature qualify for special mention in your esteemed Journal. This particular item has been exposed to the innocent gaze of the natives for two years and a half. When first I saw it, I wondered if the R. C. D. S. was teaching high pressure methods in the curriculum. Are there many more of the same kind being graduated?

Editor—This almost qualifies, just lacks the writer's name.

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ORIGINAL COMMUNICATIONS

The Quebec Survey on Dental Hygiene

JOSEPH NOLIN, D.D.S., MONTREAL.

Progressiveness is a state of mind.

It might be defined as: a tendency, a desire, an impulse, to do better things, to improve social conditions, to establish higher standards of life: material, intellectual or moral.

Progressiveness may be inborn, or it may be acquired. Some individuals or groups of individuals are prone to fidget under the monotony of established conditions of life. The natural processes of evolution which nature imposes on living beings, in the development of their growth, seem to them to be slow and unsatisfactory. They are ambitious and impatient. Human life is so short, why should one have to wait for results which might not materialize in a life time. They are the hustlers, the practical minded, the gogetters. To such as these progress means a matter of days, of weeks; not of years or of generations.

In the field of commerce, of industry, of material accomplishment, such individuals contribute a fair quota to the betterment of mankind. But their impatience is apt to lead them in

the wrong direction and to wreck their ship on the rock; but their repeated failures act as buoys, which line the safe channel where more prudent navigators may later on venture with safety.

There are other individuals or groups of individuals who have a more conservative turn of mind. These would rather wait, and make sure that any proposed change in the established order of things proves to be a real improvement, before they accept it. They like to keep their feet on solid ground. Each rail of the ladder must be thoroughly tested before they risk going a step higher. They like to build the foundation of their edifices on solid rock, with an eye to future generations.

Older communities, which in the past have been through the mill of hasty changes and of half digested so called progressive measures are apt to be of the latter species. They are wary of adventure, wholesale experimentation does not appeal to them.

The conservative, self centred and undemonstrative population of Que-

bec is a good example of such a community. Casual observers, and more especially those who live in recently established centres where everything is done in a hurry, have been prone to pass judgment on Quebec and to class its population as slow and unprogressive. Taken by many at its face value, this hasty judgment, spreading from mouth to mouth became, in the course of time, a fixed opinion, until, one day, people awoke with a shock to the fact that old and supposedly backward Quebec had public roads second to none in America; that its public finances were in a flourishing condition; that its so called antique civil laws were, everything being conceded, are among the most really democratic, in that they combined the will of the majority with due respect for the rights and well being of minorities; that the natural resources of the province were carefully tapped and exploited, while due provision was made for their permanency; that labor worked hand in hand with capital; that hysterical agitators, reformers or fad-dists of any kind, although receiving full liberty to expound their foolish theories, could only, as a rule, speak before empty benches.

This particular state of mind is reflected in the comparatively slow developments of the dental and mouth hygiene movement in Quebec, as compared with neighboring states and provinces. Public movements fostered by volunteer or private bodies are universally unpopular amongst the French people. To be successful, even partially, such undertakings must meet with a well established and favorable public opinion, which in Quebec is never easily stampeded. Not that the population is impervious to sound propaganda. But to get a hearing, such propaganda must be founded on proven facts and obvious reasoning. The people are in the habit of looking up to their intellectual leaders for confirmation and approval of any suggestion coming

from sources they believe to be irresponsible or interested. In consequence, propaganda of any sort must proceed, to make headway, from the top down and not from the bottom up, as may be done in some other places.

For several years past, the College of dental surgeons of Quebec (which, as you know, includes all the licentiates) has been desirous of establishing a province wide system of public dental education. Several spasmodic movements in that direction were initiated. They were in most cases completely abortive, through the fact that the local conditions described above had not been taken into account.

In 1921, the old dental act was completely refunded and the profession was reorganized on a new and more substantial basis. The college is now governed by a large Board, fully representative of all shades of opinions and it is provided with sufficient powers and sufficient financial resources to carry on any program it may have in mind.

One of the main articles on the programme of the present Board is the institution of a complete, comprehensive and province wide campaigning to promote mouth hygiene and dental health.

Some months ago this question was referred to a carefully selected committee for study and suggestions.

This committee gathered, from existing organizations, such information and data as could be had by correspondence. It was not long before the committee discovered that most information secured in this manner is more or less obscure and contradictory. It realized that to start serious operations on such an unstable foundation would neither be prudent nor logical. To formulate a plan on such meager knowledge would be conducive to possible, if not probable, failure: which, in Quebec as elsewhere, is the one unpardonable sin.

Let me quote a few sentences of

the report made by the committee to the Dental Board:

"The Question of educating the public at large on the importance of mouth hygiene has been, on several occasions, studied by the Quebec Board. Several attempts at concerted organization have been made, incurring the expenditure of serious sums of money. The results obtained have never been proportionate to the effort made or to the money expended. In fact they were all more or less discouraging.

"Your committee has been asked to study the question and to give advice about a more effective mode of procedure.

"In all attempts to improve existing conditions your committee is convinced that the first essential step is to adopt a mode of procedure similar to that which a good physician would follow when attempting to treat some obscure and complicated disease: make a full survey, a complete diagnosis of the situation. One must know the exact nature of an illness before attempting to cure it, and one must, moreover, be conversant with the medicament, the methods, or the manoeuvres he wishes to adopt, before attempting to use them.

"Your committee is convinced that before attempting the institution of any kind of province wide organization, the Board could more profitably use a part of whatever sum it can at present dispose of, by making a full survey of what has been done, of what is being done, and of what results, good or bad, have been obtained, both in Canada and in United States, in the field of mouth hygiene and public dental education.

"This being done, the material and the information collected could be used to foster among the leading and influential members of the community, a general opinion favorable to the reforms contemplated by the Board.

"Lastly, (and lastly only) a plan of action should be formulated, incor-

porating the good points of all successful plans adopted elsewhere. This procedure would allow the Board to avoid pitfalls and evade failure."

The above extract gives some idea of the committee's substantial and elaborate report.

Quick action followed the reception of the report. A delegation was sent to interview the Prime Minister and the Minister of Public Health of the province. The plan of making a full survey of the dental hygiene situation was submitted to them. After consultation with the department of Public Health, the government consented to defray the cost of the survey to the tune of fifty per cent., if the dental board would provide the balance.

An investigating committee, composed of Doctor Denis Forest, registrar of the Dental Board, and of myself, was immediately appointed to carry on the survey.

The task was not an easy one. It meant a lot of hard work, extensive travelling and the temporary neglect of many other important activities. I hesitated before accepting this exacting mission. But, before the unanimous insistence of the Dental Board, I felt that it would have been inexcusable to refuse.

What was to be done? And how should it be done?

After careful deliberation, we decided that our first step should be to visit the principal American centres, where efforts have been made to organize dental and mouth hygiene movements.

We successively visited New York, Bridgeport, Boston, Albany, Philadelphia, Harrisburgh, Pittsburgh, Cleveland, Chicago, Toronto, Buffalo and Rochester. Other and more distant centres we decided could be surveyed by correspondence.

In each community our investigation bore on three capital points: 1st. dental hygiene; 2nd. The correlation between medical and dental hygiene; 3rd. The viewpoint of medical and educational authorities on the value of

school age dental hygiene and dental education.

I am pleased to say that, everywhere, we were received with the greatest courtesy and kindness. All records were willingly opened for our inspection; opinions were freely expressed; school, dental and medical clinics were operated for our benefit. If we missed any information that we should have had, the fault was ours and not that of the very hospitable people who extended to us, on every occasion, a most cordial reception.

The survey covered five weeks, during which we accumulated voluminous notes, and a tremendous stack of printed matter. We are at present sorting out this precious material; being careful in the meantime, to abstain from forming a definite opinion, before this part of our work is done. Any personal bird's-eye-view impression which I may give you to-day, should be taken as such, and not as the final opinion of the investigating committee.

The earliest efforts made to disseminate popular notions of dental hygiene, were mostly of the reparative kind. They were made through the establishment of free dental clinics in public schools or in municipal health centres. Cleveland, Boston, Detroit and Rochester were among the earlier adepts of this system. They were followed by other cities among which was your own capital city of Toronto.

Then came Doctor Fones and his Bridgeport experiment, which you all know or have heard about.

Early in his career, Doctor Fones realized that the curative work attempted by the dental practitioner, was begun too late in life to be really permanent, or to allay, to any great extent, the damage done to human health by dental decay. This is not the fault of the individual dentist. His patients come to him after the harm is done. All he can do is to repair the damage and to give advice for

the future. It would hardly be fair to hold him responsible.

So much for the individual dentist.

But what about the dental profession as a whole? And what about public bodies to whom the health and welfare of the community is entrusted? Is it not on them that devolves the task of educating the public on the fact that dental decay and mouth infection, which are more frequent than all other childhood diseases put together, and which are the direct or indirect cause of many ailments, can more easily be prevented before they appear than cured after they have made inroads on the human system.

But how, thought Doctor Fones, can public bodies, including the dental profession itself, be awakened to the importance of this problem? The human mind, lay or professional, is by nature refractory to new ideas unsupported by material proof. Doctor Fones undertook to furnish the missing proof.

Useless for me to describe how he managed to get the local authorities of Bridgeport interested in the matter, to the point of allowing an experiment to be tried on twenty thousand public school children; how he had to get himself elected on the city council and on the School Board of Trustees, to overcome opposition; how he and his associates had to recruit and to educate, at their own expense, a number of dental nurses, in order to be able to carry on the work.

Although tremendous in scope, the plan formulated by Dr. Fones was simple as A B C. The experiment was limited to the first five public school grades, and to cover a period of ten years.

The work began in 1914. All the children in these five grades were examined and charts of their mouths were carefully tabulated and filed. School clinics were organized. Dental prophylactic care was given to every child, and urgent cases received immediate reparative treatment. Those in need of further reparative or pre-

ventive work, were either sent to the family dentist or were taken care of in the clinics. Careful records were kept of all cases. Dental hygiene lectures became part of the school curriculum, and the toothbrush drills were given regularly.

Some of the results obtained are enlightening, not only for the dental profession, but also for the medical and school authorities.

The 1914 survey revealed the fact that but fifteen per cent. of all children possessed toothbrushes, and most of these used it in a perfunctory manner. Thirty-five children in every hundred had lost one or more permanent molars. It was next to impossible to find one really healthy mouth among the two thousand children of the first grade. Over sixty per cent. of all the mouths examined were filthy and had abscessed teeth or inflamed and infected gums. The average number cavity per child was 5.5.

At the end of the survey in 1924 all mouths were clean, inflamed gums had entirely disappeared and all mouths were free of abscess or badly decayed teeth. The average number of cavities per mouth had fallen from 5.5 to 2.5, a betterment of fifty per cent. The number of lost permanent molars was down to eighteen per hundred mouths, as compared to thirty-five in 1914. The general health, cleanliness, attention in class and mental development showed corresponding marked improvement.

In 1912, two years before the start of the experiment, a survey was made in the Bridgeport public school on the retardation of school children. It was found that 40 per cent. of children in the first five grades had to repeat their classes for one cause or another: sickness, listlessness, inattention or simple lack of talent. Seven years later, five years after the experiment was begun, a similar survey was made by the public school authorities. It was found that retardation had fallen down to less than twenty per cent., or an improvement of fifty

per cent. over 1912. It may be said that dental hygiene alone might not be wholly responsible for this wonderful change. But after comparing the results obtained in Bridgeport to those obtained in other centres, such as Cleveland, for instance; or again in individual schools where similar experiments were tried, such as the Judson Health Centre and No. 38 public school in New York City, there is not the least doubt in my mind that dental and mouth hygiene practiced on the children has contributed to greater extent than all other causes to this improvement.

It is a notable fact that the health education received by the children in school was carried outside of school circles, to their families. This is well illustrated by the fact that, at the end of the ten year experiment in Bridgeport, the number of children entering the first grade, and who in consequence had received no instruction on hygiene, and who made daily use of the toothbrush, had increased from around 15 per cent. to over 91 per cent.

Doubts as to the statistical value of Dr. Fones' findings have been expressed, by several men met by us in the course of our survey. But, I sincerely believe that I have gone deep enough into the matter, checking up the results claimed by Dr. Fones with those obtained elsewhere to be authorized, to say that the Bridgeport experiment has demonstrated the existence of certain facts, with which most dentists were more or less conversant, but of which they had no statistical or scientific proof to offer.

One vivid impression that I bring back from this survey, and which clings to my mind, is that the question of public dental hygiene should be studied from two distinct viewpoints: the *educative* viewpoint and the *reparative* viewpoint.

It is getting to be, more and more, an accepted scientific fact that dental decay, and mouth infection hygiene, is conducive to a general disintegra-

tion of the human system. Many eminent medical authorities, such as Doctor Mayo and others, acknowledge that mouth infection is the original, or at least the contributive cause of many obscure diseases which tend to shorten human life. Unfortunately this fact has not yet been sufficiently demonstrated to be accepted at its face value by the general public. The relative influence of unhygienic mouth conditions on general health, is too subtle to be easily understood or explained.

The dental profession itself may not be entirely blameless for the indifference of the public, in this respect. It has in past years, kept aloof from the problems of decay prevention, while concentrating all its efforts on reparative work.

The very problem of the origins of dental decay (which disease is after all, the one *raison d'être* of dentistry as existing profession), has been until late years, left to take care of itself.

What are the direct or indirect causes of decay? What relation does decay bear to the general metabolic conditions of the system? Is it possible to change these metabolic conditions in such a way as to prevent recurrence of decay? These questions have awakened the curiosity of a few research men, a few thinkers; but these more often than otherwise are looked upon, by the rank and file, as mere theorist and dreamers of dreams, when they were not classified as faddists and cranks. Such problems have not, as a rule, bothered the average dentist in the least. Nor is he much interested in the care of young children's mouths. Children are a bother in the dental office. They use up a lot of time, they are difficult to operate on, and their parents are generally unwilling to pay for the time expended on them. Such is the attitude of Mr. Average dentist towards dental decay prevention.

And what about the child of pre-school age? What about the unborn baby whose teeth have begun to take

shape and to calcify, ever since the fortieth day of embryonic life? Can purely reparative work prevent or cure the ills dependent on child development at that age of life?

The educative viewpoint of dental hygiene must, in my estimation, be considered from several angles. 1. The education of the dentist himself, in the fundamental sciences which can help him to better understand the phenomena governing the embryonic and histological development of mouth and teeth. 2. The education of the medical practitioner on tooth development during embryonic and infant life. 3. The education of professional childhood educators on the importance, physical and psychological, of teaching mouth hygiene: 4. The education of school children on mouth hygiene and, 5. The education of the general public.

The scope of this paper does not allow me to discuss one by one, these different phases, except with reference to the order in which I place them; mine being a reversal of the one generally adopted.

The State of Massachusetts is one of the best organized communities in America, and perhaps in the whole world in matters of dental hygiene. While in Boston, I had a long and most interesting interview with the director of mouth hygiene and the commissioner of Public Health for the State. When I expressed my regret that, in my own province, dental hygiene is still in such an embryonic stage, I was comforted with the following words: "We think, on the contrary, that you have been very wise to let other people do the experimenting for you. In Massachusetts we feel that we have in the past, put the oxen before the plough, when we organized public dental clinics, before trying to educate the public, both lay and professional. Your Dental Boards' decision to make a thorough investigation of the question, before taking action, was a very wise one indeed. It may turn out to be one

of the numerous examples which go to prove that he who looks before he leaps, is more likely than others to land squarely on his feet".

I have found this, or similar sentiments existing in several other centres.

In a letter written at my request to give me his views on the future of public mouth hygiene education, Doctor Harris, Health Commissioner of the City of New York, writes as follows: "It is my aim to have instruction about nutrition needs for all expectant mothers and for infants up to two years of age; dental care with attention to fissures for all teeth as soon as they erupt, deciduous as well as permanent; an educational program beginning with entrance in school and continuing until health habits are fixed, stressing mouth cleanliness, and frequent visit to the family dentist or a clinic, mouth examination including X-Ray diagnosis and prophylactic treatment for all patients admitted to hospitals so that their therapeutic care may be complete regardless of the ailment which brought them to the institution either as an ambulatory or bed patient."

Let me also quote the following interesting paragraph from a letter written by Doctor L. W. Childs, Supervisor of Health Education, in Cleveland: "We know that early attention to a child's mouth conserves his health and attendance in school, but figures to prove this assertion are lacking, and would be difficult to secure. We know that Diphtheria, Scarlet Fever and that array of human ills arising from focal infections of the mouth are diminishing, but to show that this betterment is due to better Mouth Hygiene would be difficult. *We believe many things that we cannot prove.*"

Doctor B. S. Gardner, of the Mayo Clinic, Rochester, Minn., begins a letter as follows: "The establishment of the Dental Section of the Mayo Clinic demonstrates our views regarding the relationship of infected teeth

to general systemic conditions."

"In ridding the pupil of decayed, abscessed teeth, and teaching the pupils to try and keep the mouth clean and healthy," says Miss Rose L. McCoart, principal of Wooldridge School, Cleveland, Ohio, "we have accomplished much toward their mental development. This condition makes for comfort, and comfort makes greater concentration of mind possible."

I have stacks of such letters from eminent persons engaged in Public Education or the promotion of Public Health.

It strikes me that the general consensus of opinion mostly favors educating future mothers and future citizens, during early childhood, in preference to the education of the grown up generation, which is a task beyond the means of any government or public body. Limited to the education of childhood, the task is still a tremendous one. "To do all of the essential reparative work required by the children attending the eight primary school grades in New York City," said Dr. Hyatt, dental Director for the Metropolitan Life Insurance Company in New York, "all the dentists in America, working eight hours a day, and doing nothing else, would take at least three years."

And this is where another enormous problem arises. Who is going to educate the school children on dental hygiene? Their teachers? What do they know themselves, at present, about Dental Hygiene? The dentists? What does the average dentist know about child pedagogy and childhood psychology? Specially trained dental nurses or so called dental hygienists? Perhaps. They have done good work so far in this line, in New York, in Massachusetts and in Pennsylvania, while other states such as Illinois, and others, are still opposed to them.

It is not my intention, to-day, to answer any of these questions. It

would take a full hour to answer and discuss each one of them.

During my survey, I was accidentally present at four large dental conventions, which gave me occasion to talk with a large number of dentists. One thing struck me forcibly. The average dentist takes little personal interest in Public Education and Public Hygiene. He seems willing to relegate the responsibility to the few individuals who take special interest in the matter, and prefers to remain a disinterested and critical spectator of what is being done.

Yet, in view of the enormous responsibility which must fall on the Dental profession as a whole, if it would keep up its prestige before the public; looking at the importance of the task to be accomplished; keeping in mind the benefit that may accrue to the profession through a better understanding, by the public, of Mouth Hygiene: it seems to me that every dentist in the land should not only give his moral and material aid to this humanitarian movement, but that he should become a direct contributor in the world.

The Canadian Dental Hygiene Council

The annual meeting of the Council was held on Tuesday, June 14th, at the Granite Club, Luncheon at 12.30. Gen. the Hon. S. C. Mewburn presided, and there were present Mr. E. E. Reid, London, Ont., Vice-President. Dr. Eudore Dubeau—Dean Dental Faculty, Montreal University, Col. Biggar, Col. G. E. Nasmith, and Dr. Ruggles George of the Red Cross, Mr. N. L. Burnette, Director of Health Education, Metropolitan Life, Ottawa; Dean Wallace Seccombe, Col. W. G. Thompson, Drs. W. C. Trotter, F. J. Conboy, Harold Clarke, W. B. Amy, R. Gordon McLean, A. D. A. Mason, I. H. Ante, G. V. Fisk, F. G. Husband, G. W. Grieve, J. F. Adams, R. J. Godfrey, O. G. Plaxton, J. W. McDonald, W. S. Madill, A. M. Hord, R. Zimmerman, F. W. Barbour, E. Guest, C. E. Pearson, W. E. Willmott, A. J. Broughton, J. A. Bothwell, G. G. Hume, R. S. Woollatt, A. W. Ellis, Arthur Day, J. F. Porter, J. C. Livett, H. S. Thomson, and E. A. Grant.

Gen. Mewburn in his opening remarks expressed his pleasure at being present, and congratulated the organization on the progress that had been made. He was glad to see that Mr. E. E. Reid who was associated

with him in the organization as Vice-President, was present, and also Dr. Dubeau of Montreal—Mr. Burnette representing the Metropolitan Life, which is doing such an important health work, also Col. Biggar and other representatives of the Red Cross. He referred to the service rendered by the Canadian Army Dental Corps to the Troops during the war, as demonstrating the valuable work which could be accomplished by this organization in promoting the health and well being of the people of Canada in peace time.

The Secretary read letters of regret at their inability to be present, from—Dr. J. H. King, Minister of Health, Ottawa.

Dr. John A. Amyot, Deputy Minister of Health, Ottawa.

Dr. Forbes Godfrey, Minister of Health for Ontario.

Dr. W. J. Bell, Deputy Minister of Health for Ontario.

Dr. C. J. Hastings, Medical Officer of Health, Toronto.

Dr. J. T. Phair, Ontario Department of Public Health.

Mr. J. E. Atkinson, Toronto Daily Star.

Mr. W. A. Mullis, of the Hamilton Spectator.

Mr. A. F. C. Fiske, Third Vice-President, Metropolitan Life, Ottawa.

Dr. Geo. D. Porter, Director of Health Service, Toronto University.

Regrets were also received from: Dr. Jas. Robertson, Chairman Canadian Red Cross Society; Dr. A. E. Webster, Toronto, Dr. T. F. Campbell, Galt, Ont., Dr. R. J. Sprott, Barrie, Ont.; Dr. S. A. Moore, London, Ont.; Dr. W. H. Woodrow, Brockville, Ont.; Dr. J. F. Roach, Wolfville, N. S.; Drs. Dalrymple, Trelford and Spaulding, Toronto.

Many of the above gentlemen could not attend, as our meeting conflicted with important sessions of the Canadian Public Health Association, now in annual Convention in Toronto.

As the minutes of the last annual meeting have been distributed to all the members, and printed in the Dental Journals, it was moved by Dr. H. Clarke, that they be taken as read. Seconded by Dr. Amy. Carried.

The Secretary then presented his report, and audited financial statement, and moved their adoption. Seconded by Dr. Bothwell. Carried.

Dr. H. S. Thomson gave an address covering his work as Field Officer.

Dr. Trotter, chairman of the executive, presented the report of the executive committee, and moved its adoption. Seconded by Col. Thompson. Carried.

Before discussing Dr. Trotter's Report, the Chairman called on some of the visitors for a few remarks.

Dr. Dubeau, who had come up specially from Montreal, said he was very pleased to be present. He told of his visits to Ottawa in company with Dr. H. S. Thomson, to interview Cabinet Ministers regarding the grant. He was gratified that five thousand dollars had been given this year by the Government, and hoped it would be doubled next year. They had done some Oral Hygiene work in Quebec, and expected to do much more in the future. At the last session, their Pro-

vincial Government had granted the sum of fifteen hundred dollars, and commissioned Drs. Nolin and Forest to visit other centres in Canada and the United States, and prepare a report on Dental Service to be submitted at the next session of the Legislature, and they hoped this would lead to the establishment of Dental Services in connection with the Medical Health Services in Quebec.

Mr. E. E. Reid said he was glad to be present, and to be connected with an organization which had such an important field, and which now appeared to be making progress. He was also glad to note that another Insurance Company, The Metropolitan Life, was represented in the person of Mr. N. L. Burnette. It was his own ambition that all the other Life Insurance Companies would combine to follow the lead of the Metropolitan in health education and thus help to promote the welfare and happiness of the people of Canada, by preventing disease and reducing the death rate.

Mr. Burnette, when he was called on, said he was absolutely sold on this organization, and the work it is doing. He appreciated the tributes to his own Company, and as a Canadian, he greatly admired the work of Mr. Reid and the London Life in giving a lead as to what Insurance Companies should do in Health work. In his own work he was tremendously struck by the fact that Oral Hygiene runs through the whole warp and woof of preventive medicine, and he felt that his own Company would be only too glad to help in any way it could, the work of this organization. He had been much impressed by the reports presented and the plans of the Council, and he asked if the Council, through Mr. Reid, would let his Company know what way they could assist, and he would be only too pleased to give his support.

Col. Biggar spoke of the work of the Red Cross, regarding the grant they had made to the Council. He felt it was only due to the organiza-

tion, because it was carrying out some of the things the Red Cross was striving for in its peace time programme.

Dr. Trotter's Report was then brought up for discussion, and the following resolutions were presented.

"Resolved that this meeting commends the action taken by the Executive on the question of Dental Service and Oral Hygiene for immigrants, and requests that further study be given to this subject, in order that a definite plan might be worked out." This was moved by Dr. Ellis, seconded by Dr. Woollatt. Carried.

"Resolved that this meeting endorse the suggestion of the Council co-operating with the Provincial Dental Association of Saskatchewan and their Oral Hygiene Committee, for the purpose of carrying on a carefully planned Oral Hygiene Educational Campaign throughout that Province within the next few months." This was moved by Col. Nasmith, seconded by Dr. Harold Clark. Carried.

"Resolved that the number of the Executive be increased from fifteen to twenty, and the Executive be given power to appoint additional members up to that number." Moved by Dr. A. J. Broughton, seconded by Dr. W. E. Willmott. Carried.

"Resolved that a hearty vote of thanks be tendered to the Canadian Oral Prophylactic Association for providing without cost, to the Council, the services of the Field Secretary, Dr. Harry S. Thomson, during the past year." Moved by Dr. R. G. McLean, seconded by Dr. C. E. Pearson. Carried.

Election of Officers:

It was moved by Dr. Mason, seconded by Dr. Amy that the present officers be re-elected. Carried.

It was moved by Dr. Woollatt, seconded by Dr. Godfrey that the present Executive Committee be re-elected with power to add to their numbers in accordance with the previous resolution. Carried.

Dr. Willmott moved that the present Auditors—Thorn, Mullholland, Howson and McPherson be re-appointed. This was seconded by Dr. F. J. Conboy. Carried.

Meeting then adjourned.

Edmund A. Grant, Secretary.
Report of Executive Committee—Dr. W. C. Trotter, Chairman

Your Executive Committee are pleased to report that the affairs of the Council and the prospects for useful work are more promising than any time since its organization.

In August our Field Officer and myself, attended the meeting of the Canadian Dental Association at Halifax, without expense to the Council. I presented a report from the Canadian Dental Hygiene Council, before a general session of the Association which was received with a great deal of interest. Dr. Thomson and I also succeeded in gathering together representatives of several of the Provinces who are interested in Oral Hygiene work, and discussed with them, ways and means of helping them to carry on this work in their respective Provinces.

During the recent combined meeting of the Canadian and Ontario Dental Associations in Toronto, I presented a report at a large Oral Hygiene Luncheon Meeting, at which were present hundreds of dentists, and several prominent personages interested in this work. The Chairman of this Luncheon Meeting, was Dr. A. W. Ellis, a member of our Executive, and Col. Geo. Nasmith, also a member of our Executive, gave a short talk on the work of the Canadian Red Cross.

During this Canadian and Ontario Dental Association meeting, Col. Nasmith, Dr. Grant, Dr. Thomson and myself arranged a breakfast meeting at the King Edward Hotel, for all the delegates from the different Provinces to the Canadian Dental Association Meeting. We explained to them how we wished to carry on educational work in the various Provinces, un-

der the auspices of their Provincial Dental Associations, and asked for their suggestions as to how this could best be accomplished. The discussion which ensued should be of the utmost value in helping us to decide which Province is likely to be the most fertile field for our efforts in the near future. As the Province of Saskatchewan is well organized from a dental standpoint, and also has many Red Cross Outpost Hospitals, it seems to be the most appropriate place for us to carry on our organized dental Health Campaign. In preparation for this plan, one of our executive, Dr. F. J. Conboy, Director of Dental Services for the Ontario Government, who was attending the combined meetings of the Dental Associations of Manitoba, Saskatchewan and Alberta, held recently at Edmonton, gave a report of our activities to that meeting, and solicited suggestions as to how best we could help them in their oral hygiene work.

By making reports to the various dental Conventions at different parts of Canada, and by constantly publishing accounts of our activities in the Dental Journals and public press, we will gradually succeed in educating the dentist and the public in regard to the nature of the work we are attempting to do, and the results we hope to obtain, and in this way, enlist their sympathetic co-operation.

The cumulative effects of the work done during the past two years in educating the members of the Federal Government with the importance of the work we are doing and planning to do, has at last borne fruit in the form of a grant of five thousand dollars (\$5,000.00) recently made to the Council.

The fact that the Canadian Red Cross had just reorganized our status as an important public Health Organization, by a grant of two thousand five hundred dollars (\$2,500.00), was certainly a powerful influence in securing the decision of the Ottawa Cabinet. We particularly have to

thank Col. Geo. Nasmith, for his personal influence and work in securing both these grants, and we also owe Mr. J. E. Atkinson of the Toronto Daily Star, and Dr. Eudore Dubeau of Montreal, our unstinted gratitude for the splendid and unselfish work they did in connection with our appeal to Ottawa, without which we never could have succeeded.

I wish that time would allow me to mention more in detail the work these gentlemen did, and also the work that many more of our friends cheerfully did to aid us in securing these grants.

It is now up to us to prove by our works, that we are worthy of those grants and of more to come.

The educational work we have been carrying on so far, has been greatly restricted by our lack of financial resources and has been largely confined to lecture work by our Field Officer, and the distribution of educational material such as material suitable for lectures of different kinds, lantern slides, pamphlets, newspaper articles, etc., for distribution to dentists in various parts of Canada. Dr. Thomson, the Field Officer, in his report has given you a more detailed account of the educational work that has been accomplished during the year. He has also given you an account of his trip to the Red Cross Port Nursery at Quebec, and the impression he received from his contact with the immigrants arriving there as well as his view of the possibilities of improving these unfortunate mouth conditions.

We have to thank the Canadian Oral Prophylactic Association for so generously loaning us the services of Dr. Harry S. Thomson, nearly all of whose time is at our disposal to use as we see fit. The money grants which we have just received, should enable us to make more profitable use of his time than we have been able to do in the past, owing to lack of money to defray his travelling expenses. The Ontario Dental Association has been very kind in giving us generous

grants the last two years, and we trust they will be able and willing to repeat them this year. Unfortunately, the other Provincial Associations are not financially able to do much more than assist us with travelling expenses while working in their Provinces.

This Council has now firmly established itself as an important member of the family of Health Organizations. These organizations all agree that the proper care of the mouth and the teeth is one of the most important factors in the maintenance of general health in any community. Almost all medical authorities agree that clean mouths and healthy teeth are important adjuncts to the maintenance of general health, and on the other hand, that focal infection at the apices of the teeth are responsible for many illnesses. Dr. Parfitt, of Gravenhurst Sanitarium, says that the relation of diseased teeth to heart disease, arthritis and anaemia, is widely recognized by the Medical Profession, but he doubts whether it is generally recognized that these latent focal infections favor the development of tuberculosis.

Sir William Osler said, "There is not one single thing in preventive medicine that equals mouth hygiene, and the preservation of the teeth." In fact, innumerable quotations of similar nature could be given relative to the importance of spreading the gospel of mouth health.

The benefits accomplished by the establishment of public school dental clinics and the teaching of mouth hygiene, are amply proven by results already obtained all over this continent, where a few years ago over 90 per cent. of the children were found to have diseased teeth, whereas now this percentage has been more than cut in half. This improvement was brought about by having all the children's mouths examined at regular intervals, and defects of the teeth remedied immediately they were found. The number of delinquent and backward children has so decreased,

that the time saved through more regular attendance and more mental alertness, has reduced the cost of teaching far more than sufficient to pay the cost of the clinics, besides insuring the children of longer and healthier lives. The results obtained by this kind of health work are probably more tangible than that of any other kind of health service.

Besides assisting in the spread of this Oral Hygiene work among the school children of Canada, this Council is anxious to carry the same message and also some kind of clinical aid to worthy immigrants arriving on our shores, and lonely settlers in out of way districts far removed from the services of a graduate dentist. By working in co-operation with the Canadian Red Cross Society, it may be possible to give this service by making use of their Outpost Hospitals in the various Provinces in which to establish a temporary or travelling clinic. We hope to accomplish something along these lines during the coming year.

We would suggest that this meeting should express its approval of the efforts made by the Executive in connection with establishing Oral Hygiene instruction and dental services for immigrants.

We would like this meeting to endorse the suggestion of the Council co-operating with the Provincial Dental Association of Saskatchewan and the various Oral Hygiene Committees of that Province with the purpose of carrying on a carefully planned Oral Hygiene Educational campaign, throughout the Province within the next few months.

A resolution of appreciation should be sent to the Canadian Oral Prophylactic Association, for so generously placing at our disposal the services of Dr. H. S. Thomson, without expense to this Council.

Our Charter and Bylaws at present only provide for an Executive Committee of fifteen members. As eight of these at present do not live in To-

ronto, and as it is difficult sometimes to be sure of having the necessary quorum of six, we would like this meeting to increase the number on the Executive to twenty, and give the Executive power to appoint the necessary members to make up this number. I may explain that the active work of the Council is now being looked after by a small sub-committee, of the Executive, consisting of Col. Nasmith, Dr. Grant and myself, who report back to the large committee at frequent intervals.

The Executive is going to take under consideration the advisability of appointing a committee to confer with the Canadian Press Association, to arrange some plan of co-operation.

Report of the Field Officer—Dr. Harry S. Thomson

In order that we may extend our Council to its greatest sphere of usefulness, it is necessary that there be constantly carried on organization work, and this year this particular part of the work has been a very important phase of your Field Officer's activities. It is very necessary that organization work be carried to dentists and dental societies, and be it said to the credit of the Profession of Dentistry, that fully 100 per cent. of the dental societies in Canada have assisted in the promotion of the work of the Canadian Dental Hygiene Council. The Canadian Dental Hygiene Council is not exclusively a professional organization; primarily, it was promoted by the profession, but its membership is made up of public-spirited men from every walk of life.

That the organization has proved its worth, is established by the fact that all of the health organizations, both special and general, throughout Canada, have endorsed our programme, and many of them have extended to us co-operation—and some of them very tangible assistance. The word "Dental" in the Canadian Dental Hygiene Council, does not pertain to the profession of Dentistry, but to Dental Hygiene as practised and advo-

cated by the profession, and it is quite necessary, in order that our Council shall be a success, that we have the support of the greatest number of the dentists.

Thus, we have considered, in the Canadian Dental Hygiene Council, that it was wise to put forth considerable effort in promoting the Canadian Dental Hygiene Council to Dentists, knowing that much of our work can be destroyed in a few seconds by a discouraging remark from a dentist, in whom the patient has considerable faith. Our endeavor has been to promote in the dentist the Oral Hygiene vision—and it is a wonderful vision, for it opens up an entirely new line of thought and activity to the man, who has been carrying on his practice more or less mechanically, or largely from a restorative or reparative standpoint, and who has considered his work more for its lasting quality, and from the physical side of stress and strain and masticating properties. To these men the Oral Hygiene Vision opens an entirely new field. While he is still concerned with restoring and repairing, he is more particularly concerned with the cause of the condition which he is restoring and repairing. He looks back in the general life history of the patient and the patient's antecedents. He delves and digs into the diet, exercise and environment and habits of living of the patient. His outlook is changed from one concerning only the patient in the chair, to one concerning almost the entire community, and the result is that, having then gained this Vision, his work is not only more lastingly done, but it is thoroughly—more efficiently done, and he is performing a greater service to his community and the public when his outlook is humanitarian rather than purely practical.

The Field Secretary of the Council has during the last few years covered Canada from coast to coast, meeting every Dental Organization and presenting to them the story of our

Council and enlisting their aid and support in its general programme and the more special features of it.

In August of last year, your Field Secretary attended the Canadian Dental Association meeting at Halifax, and at that time gave a short report of one phase of our activities and gained personal contact with many dentists from different parts of Canada, which I am sure will be of value to the Council. He also attended the meeting of the New Brunswick Dental Society at St. John, N. B., and there again gave a report of the work we were trying to do. Later on in August, he met with the Prince Edward Dental Association and with them went into a situation which had arisen there regarding free dental treatment for the outlying districts of their province. The request had primarily been inspired by a very active Red Cross worker and the Provincial Secretary, and as a result of our efforts, the Prince Edward Dental Society has appointed dentists who will carry on this work at intervals, on a salary basis, the contact with the communities being established through the Red Cross and the responsibility for the remuneration and the collection of fees, or the question of free service, is taken by the women's institutes of the community in which the work is being carried on.

During the past month, at the joint meeting of the Ontario and Canadian Dental Associations, a successful effort was made here to gain the largest possible contact with the dentists from different parts of the Dominion and again we were unusually successful, for we had the unique experience of having eighteen men present from different parts of Canada, to attend a breakfast meeting, at eight o'clock in the morning, notwithstanding that there had been a very special event the night before, which kept many out of their beds until the small hours of the morning.

During the early part of last Autumn, part time of your Field Sec-

retary's services were loaned by the Council, to the Academy of Dentistry, and the City of Toronto to assist them in carrying out any special activities in promoting Health Day.

Early this year, our efforts were concentrated in bringing to the attention of the Federal Government at Ottawa, the work that the Council has already performed, and laying before the Cabinet an outline of the future programme, trying to impress upon the Government our belief that they should take some responsibility in this work. Our efforts here were partially successful as you know, the Minister of Health making us a grant of five thousand dollars.

The problem of dental treatment for immigrants is one with which we have been concerned during the last two or three years, and this year steps were taken to find out all the conditions governing such an effort. To that end, through co-operation of the Red Cross, a trip was made to Quebec City, and an opportunity given to study at first hand, all the machinery governing the reception of immigrants from the time they disembarked from the boat, until they were on their train for their point of destination. Through the splendid assistance given by Miss Tremayne, Nurse in charge of Port Nursery, to whom I owe a great deal of thanks, and also Dr. Lawrie, chief Medical Officer of the Port, I was able to study the medical and civil examination at this port, and the final decision on this is embodied in a report which was presented by our Executive Committee and is incorporated in the minutes. Work, to the immigrants would be a splendid humanitarian piece of work when the machinery is established to carry it on successfully, and I think before that work can be carried on, it is necessary that regular points of contact be established so that the immigrant can have any necessary services rendered.

At the Council's Dominion headquarters, 86 Bloor St. W., a large quantity of educational and Oral Hygiene material has been gathered and requests for this material have been received from Dentists, Teachers, and School Boards from every Province in the Dominion. These consist of pamphlets, charts, cards, lantern slides and will later on include moving picture films. Considerable money has been expended on this phase of the work, and much more can be expended for it is much easier to inspire all, to carry on Oral Hygiene work if we can provide them with the necessary equipment and assistance.

We have this year completed a book which is a revision of a book that is gotten out by the Oral Hygiene Committee, of the Province of Ontario. This carries splendid material for lectures on Oral Hygiene. We also, now, have in preparation a book for school teachers and normal school students, and I feel this particular phase of our work is capable of greater expansion, for there is possibly no group of young people preparing for their life work with whom we can carry on to greater advantage, where more splendid definite results can be obtained, than through Nurses, Nurses in training, and school teachers.

During the last thirty days, the Council has loaned my services to the Ontario Red Cross, to assist them in their campaign for funds to carry on their programme.

And now for the coming year, with increased financial resources and with added responsibility under which we are now working, i.e., with a Federal Grant and a Red Cross Grant, we have reached out and formed definite plans to carry on active mouth health work in different parts of the Dominion. For the Province of Saskatchewan, we are now considering a programme jointly with the Saskatchewan Dental Society for an extensive year's work, which will embrace gen-

eral Oral Health propaganda, and the carrying of dental services to remote and sparsely settled districts, and also to provide dental services to some of the outpost hospitals.

We are starting this year with high enthusiasm, an active Committee, and additional funds, all of which gives us hope that next year's activities will be far reaching in their scope and great benefits will be accomplished.

In presenting this report, I would first like to explain that Dr. R. J. Reade who was appointed Secretary-Treasurer at the last annual meeting, carried on the work until January of this year, when he resigned, as he found it impossible for him to continue. I was then asked to resume the Secretaryship. At the same time an honorarium was provided which enables me to employ a stenographer to assist with the greatly increased correspondence and office work. The appointment of a Sub-Committee consisting of Drs. Trotter, Nasmith and myself to carry on active work between meetings of the Executive Committee and the co-ordination of the work of the Field Officer and Secretary-Treasurer, were steps which improved the efficiency of the organization.

Since last annual meeting, your Executive have held eight meetings, and the Sub-Committee have held six meetings since February. The Sub-Committee also held a conference with delegates from the different Provinces, during their attendance in Toronto at the Ontario Dental Convention last May.

Gen. Mewburn and Mr. E. E. Reid, who have always been most helpful when called upon, came to the city last November in order to meet with the Executive in conference. Also, it might be mentioned that Dr. Trotter, Chairman of the Executive, journeyed last August, all the way to Halifax, in order to give a report to the Canadian Dental Association, on the work of the Council.

The financial statement which I am about to read, covers only actual receipts and expenditures. It does not include the grant of five thousand dollars, passed by the Dominion Government, as this was not received in the period covered by the report, nor does this include the salary of the Field Officer, as this is paid by the Canadian Oral Prophylactic Association.

*Statement of Receipts and
Disbursements*

(Year ending May 31st, 1927.)

Receipts

Cash on hand and in bank,	
June 1st, 1926	\$ 576.79
Contribution, Canadian Red	
Cross Association	2,500.00
Canadian Dental Research	
Foundation, Rent:	50.00
Sundry Refunds	2.65
	\$3,129.44

Disbursements

Secretary, on account of	
honorarium:	300.00
Travelling Expenses	314.40
Rent	300.00
Stenographic Assistance, Sta-	
tionery and Postage	96.44
Magazine Subscriptions	34.50
Meeting Expenses	62.55
Auditors' Fees (1926-26	
period)	30.00
Bank Exchange	.30
	1,138.19
Cash in Bank May 31st, 1927	1,991.25
	\$3,129.44

Audited and approved.

(Signed) Thorne, Mulholland, How-
son and McPherson,
Chartered Accountants,
Auditors.

At the beginning of the calendar year, the Executive drew up a plan of activities for the year, which called for an expenditure of ten thousand dollars. (As explained before, the salary of the Field Officer is not in-

cluded in this amount). About eight thousand dollars have already been promised, so that the Executive feel confident the balance will be forthcoming.

Respectfully submitted

(Signed) Edmund A. Grant
Edmund A. Grant,
Secretary-Treasurer,
Canadian Dental Hygiene Council.

UNIVERSITY OF TORONTO
Faculty of Dentistry
ANNUAL COURSE FOR DENTAL
PRACTITIONERS
to be held

September 12th-17th, 1927

The Dental Practitioners' Course is designed to meet the need of general practitioners who may desire to refresh their knowledge and become more familiar with the advances of recent years in important branches of dentistry.

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Lectures will be given in the following subjects:

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Practitioner
Dental Praxis
Periodontia

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Registrants may make selections from the following subjects for group study, demonstrations and clinical practice:

Orthodontia for the General
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Operative Dentistry
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Periodontia
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Denture Prosthesis
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Treatment for the Infected Antrum

FULTON RISDON, M.D., D.D.S., F.A.C.S., TORONTO

The treatment of the infected antrum of the type which concerns the dentist most, is where the infection has gained entrance through the alveolar process. In the molars and bicuspid, the tooth root may lack its covering of periosteum or periodontal membrane, and project directly into the antrum; or a cyst from these infected teeth may have broken into the floor of the antrum. The same thing may occur with the anterior teeth. Occasionally one finds the lateral infected and the pus has penetrated between the two layers of compact bone and entered the antrum at some considerable distance from its origin. In this article we are not discussing other complications such as Osteoma, Fibroma, Odontomes, Sarcoma or Carcinoma, but would like to mention that there is a condition which is fairly common known as Osteitis Fibrosa (Paget's Disease) which one should keep in mind at all times, to prevent a marked error in judgment in calling this an infected antrum, where one has X-Ray evidence only. In this condition the bone is thickened and the antrum decreased in size, and the X-Ray shows a haziness, which is comparable to an infection; but the bone in the alveolar region is much thickened—a condition which is not met with in the commoner infections.

Another important point to be remembered is that the antrum may be infected from the frontal sinus or the anterior or posterior ethmoids—more likely from the anterior,—and pus may gain entrance through the ostium maxillar or through the upper and outer wall of the nose in the region of the Os planum. The antrum also becomes infected during

an acute coryza or influenzal attack, and these cases should not be confused with the more chronic infections, which have been mentioned above.

When speaking of treatment, one is really thinking in terms of drainage, and the more adequate the drainage is, the more rapid the healing process should be. One thing, though, that has been noticed is that drainage into the mouth is not so useful as drainage into the nose; but this may be accounted for by the fact that the antrum is really a part of the nose and is accustomed to the nasal flora but not to the oral flora.

Let us consider a concrete case, where an opening exists through a bicuspid or molar tooth into the Antrum of Highmore, and at once you are confronted with the problem of whether a chronic osteomyelitis exists in this apical area, because if it does, it is necessary to make your opening larger and thoroughly remove this diseased bone, giving due consideration to the fact that you will by this treatment stir up more infection. At this stage may I suggest that I am of the opinion that the infected antrum may be cured by drainage through the alveolar opening; but at the same time I am convinced of the fact that if the alveolar opening is closed or allowed to close, and counter-drainage made under the inferior turbinate in the nose, the progress of the case will be more marked, and a greater percentage of your cases will be cured. A number of these cases will not do well. By that we mean that polypoid degeneration of the antrum has occurred, or else a further ne-

crosis of the bony floor; and this undoubtedly must mean more radical treatment. It is considered as a general rule, that these cases should be irrigated—preferably through the inferior meatus—for from four to six weeks before a radical operation is considered.

There is one operation that is frequently done before any radical operation is attempted, and that is making a large opening under the inferior turbinate in the nose, and if, after some time the so-called drainage operation above mentioned does not heal this condition, then a radical operation is to be considered.

The Caldwell-Luc radical antrum operation is, in my opinion, the best operation, where it is indicated. It consists of making a moderate-sized opening in the Canine Fossa well above the apices of the teeth, giving in this way surgical access to all

parts of the antrum, establishing counter-drainage into the nose through the inferior meatus and closure of your primary opening in the canine fossa. We fully expect all these cases, no matter how diseased, to be well in ten days, with or without further irrigations. We are aware that some men, not rhinologists or the well-trained oral surgeons, merely make the canine fossa opening and keep this open with packing for some weeks without making counter-drainage into the nose; but we only mention it to condemn it, as it is most trying for the patient and is not so usually successful. I have seen cases treated in this way and at each dressing their agony was intense and entirely unnecessary.

In conclusion, we would state that this sinus lends itself to successful treatment in a marked way.

“Blest be the Brush that Cleans”

Sung to “Blest be the Tie that Binds”

Blest be the brush that cleans
Our teeth at morn and night;
The water and the paste, the means
To keep them clean and white.

And after each meal we eat,
And ere we sleep at night,
Again we use the brush, the paste,
This keeps them clean and white.

We share our mutual woes,
We share each others fun;
Our tooth brush is ours, and ours
alone,
We share this brush with none.

Blest be the brush that cleans
We praise it loud in song;
To use it well, at proper times
Will make us both well and strong.
—R. P. KEENE, D.D.S.

Western Canada Territorial Dental History

W. D. COWAN, D.D.S., REGINA, ASSOCIATE EDITOR D. D. J.

In opening, let me express surprise at the course pursued by Mr. Bulyea in answering through the Leader charges made by me and a full report of which only appeared in The Standard. The Leader's report of the investigation meeting was so incomplete that its readers must be left in complete darkness as to the charges Mr. Bulyea is replying to. This, however, is characteristic of the unfair tactics which the North-West Government has followed in dealing with us. Afraid to meet us on the floor at the investigation they resort to a newspaper controversy made as much one-sided as possible.

I have no time to deal with Mr. Bulyea's personal references. The public has no time to bother with my personality or "imagination." It is only Cabinet Ministers who toy with such boyish arguments. As a business man I will deal only with facts and leave the public to judge.

The most serious charge that I made against the Government was that they connived to have and succeeded in having the Dental Ordinance changed between sessions of the Assembly. Dealing with this charge Mr. Bulyea says:

"Then, again, Dr. Cowan was far astray from the truth in his statements respecting the Consolidation Commission. The doctor did not learn it all at school, for there are some things yet in the world that he cannot claim to run. I doubt if he could ever understand the matter, and I do not attempt to teach him even the rudiments of legislative methods; but you can take it from me that everything that was done by the Consolida-

tion Commission was done carefully, properly and with the fullest authority. I need only state that the Commission was composed of Judge Richardson, Judge Wetmore and Mr. C. C. McCaul, K.C., three of the ablest lawyers in the Territories, to dispose of anything Dr. Cowan may have to say with respect to their work."

It will be noticed that in the above Mr. Bulyea does not deny that the changes were made. His statement is tantamount to an admission that Consolidating Commission did change the law. He can't do anything else but admit it for there is the law printed and published by themselves as it went to the Commission and as it came from them. For the public information I will quote to show one of the changes made. (See No. 41 of 1897 and chapter 53 of Consolidated Ordinances).

Before Consolidation we were compelled to charge for registration under clause

- (a) \$25;
- (b) \$25;
- (c) \$25;
- (d) \$10;
- (e) Nothing.

After Consolidation we were compelled to charge for registration under clause

- (a) Not mentioned;
- (b) \$25;
- (c) \$25;
- (d) \$25;
- (e) \$10.

You see they changed the whole thing round about, American graduates had their fees raised from \$10 to \$25. Territorial students from nothing

to ten dollars, while illegal practitioners who had to pay \$25 before were ordered to be registered for nothing. This caused us endless confusion and left us under suspicion of illegally extorting money from certain men. Now Mr. Bulyea, having practically admitted that these illegal changes were made, it is your duty to give the authority under which it was done. I defy you to give that authority for it does not exist. Under the Ordinance constituting the Commission the Commissioners were strictly and specifically prohibited from "changing the legal effect" of the laws (see Ordinances 1897). Is it "changing the legal effect" to raise a man's fees from \$10 to \$25? It certainly is; so that the Commission did exactly what the law said they must not do. It is unnecessary to say that it is a flagrant violation of the system of popular government to allow non-elective officials to "change the legal effect" of the laws. Such was never contemplated. Such was never done and it would not have happened, I am confident, had not the Commissioners been misled by documents submitted to them and deliberately falsified. There is no other way it could be done, for Judge Richardson's court, it is needless to say, is above suspicion. Who did it, then? It was the hirelings of the Government who came to me beforehand and asked me to "keep my mouth shut" about it. No, Mr. Bulyea, you can't teach me the rudiments of your legislative methods. They are not teachable. They can only be practiced by a peculiar class of politicians to which happily I do not belong.

A politician who would monkey with a court of justice would do anything.

"You can take it from me" that all is right, says Mr. Bulyea. How convincing! His usual depth of insipidity.

Now, Mr. Bulyea, I do not want any "imagination" I want a straight statement from you showing the authority under which these changes were made

If you can't give it you must stand convicted.

Now, to come to Mr. Bulyea's charge that we are trying to keep other dentists out of the Territories and thus have a little preserve of our own. I need only say that the Territorial Dental Association was the first body of the kind that ever passed a resolution in favor of Dominion registration. We did so in 1891; we have been urging it ever since and I go to Montreal next September to help establish a Dominion council and a national standard. For eleven years we have been working to that end. Does Mr. Bulyea know what that means? It means that the day after we get what we want every dentist in the Dominion of Canada will have the right to start up business in the Territories if he wants to. A free field for every qualified practitioner. Is that trying to keep other men out? Without a single exception every time we have gone to the Assembly we have asked that the graduates of British and Canadian institutions be all recognized on sight; no hindrances whatever. We have also admitted the licentiates of all provinces with a standard equal to our own. Is that trying to keep men out? I defy Mr. Bulyea to cite a contradiction of this statement.

We are accused of committing a rank injustice to certain men in refusing to register them. Mr. Bulyea names some of them and then asks will Dr. Cowan say these men are not as good as he is himself. I have carefully avoided saying anything disparaging of these men, but now I am forced to speak the truth. I will give you an idea of the class of men we are refusing. Here is a sample letter from one of them. You will notice he takes the title of Doctor of Dental Surgery. Can't even spell the title he has had conferred upon him. The letter reads:

Calgary, April 12, 1902.

U. Blank, D.D.S.

Dr. W. D. Cowan.

Dear Docktor:—I have Just received yours Of March 23rd was sorry that I had not received it In time to come down as I would like verry much to have been preasant at the association meeting Your letter was over alberta and Part of B.C. before I received it hoping To have better luck next time

I remain
Respectfully Yours

J B—

Now, I ask how so illiterate a man as that can have studied the dental text books dealing with the rankest poisons. And let me say that we dentists have to use daily on our patients the deadliest of drugs. Is it right that the public should have turned loose on them, to treat them in this manner which may mean life or death, a horde of men so illiterate that they cannot spell ordinary English? I ask is it possible that that man can have studied until he is competent to handle what we are compelled to authorize him to do? We refused that man. The Government changed the law to suit him and he got in.

Another case. The wife of a Superintendent of the N.W.M.P. applied to one of the men we refused, for professional services. Chloroformed; teeth extracted; most horrible agony succeeded. Shipped about 100 miles to Moose Jaw; examined there; outer plate of dental arch found ripped out from eye tooth to second molar. Lips lacerated and soft tissues of mouth torn or cut out. Impossible ever to make a set fit the mouth properly. That Supt. of Police writes: "I regret very much that stress of work prevented my being present at the time teeth were drawn, as I might have then prevented some of the rough handling of which there is so much evidence.

"(Signed) M———

"Supt. N.W.M.P."

Again last March, a Saskatoon physician well known in Regina wrote me. "Are these dentists up through

here any good? Dr. ——— (naming a man whom we refused but was ordered registered by the Government) was here recently but his work is all useless already."

I could go on multiplying these indefinitely, but for the present I will content myself by asking do the public want this sort of thing?

With the facts before you can anyone say we were doing the unjust in refusing these men? As far as we could see their diplomas were all the same. Now what would have happened had these men applied for registration in Manitoba? Refused, every one of them. In British Columbia? Refused. In Ontario? Refused. In Quebec? Refused. In the United Kingdom? Refused. The only government in the British Empire apparently, the only Solomon of wisdom, is the North-West Government. This latter knows it all. It is the all wise authority. The Imperial Government and the Governments of Manitoba, Ontario, etc., are all composed of fools, just like the officers of the North-West Dental Association.

Now I will make a challenge to Mr. Bulyea. If he can get any man that we refused and that he has named registered in any of the places above mentioned I will pay the registration fee. All you have to do is to write to the Governments named and you will find that they won't have anything to do with the diplomas we refused. When all the rest of the British Empire does what we did surely there is something to support our action!

It is very unfortunate for Mr. Bulyea that the facts are against him. He says: "everybody but Dr. Cowan seems to know that a year's course at any college is never twelve months long, but varies from six to seven months and upwards." Mr. Bulyea is entirely wrong. Without a single exception the year's course in every dental college in the British Empire is twelve months. The Royal College of Ontario requires twelve months out of every year, and every student has

to put in twelve months out of every year for three years or he can't get the diploma of that college. I refer you to Dr. J. Branston Welmott, dean of that college, to substantiate my statement, or to by-laws Nos. 5 and 6, governing that institution. There are some five hundred dentists in Ontario every one of whom had to put in three years of twelve months each before he was licensed. It is the same thing with the National College of London, England. The announcement of the University of Buffalo (page 18) says: "The curriculum includes a winter term of seven months and a summer term of five months." Twelve months. The trouble is the American colleges don't do what they profess while the British colleges do. Every part of the empire requires twelve months per year—less national holidays—from its dental students. A portion of the term may be commuted by preceptorship. That is all we have asked that they spend the full year either in college or in college with a preceptor, and anyone who could not comply with this we refused. We interpreted the law in the British sense. The Government gave it the American meaning which may mean anything at all from three months to thirty-six months.

I can readily imagine that some one will ask why we do not take a test case to court to prove that the Government has placed a wrong interpretation on the law. In reply it is only necessary to say that the same law denies us access to the courts. The law provides an appeal clean over the head of the common court to the supreme head, to wit, Hon. Haultain, and we have to obey Mr. Haultain whether Mr. Haultain is right or wrong.

Just to give your readers an idea of the iniquity of the law I am going to repeat a conversation which took place a few days ago with Mr. John Stubbings of the Glasgow House. This is but one of probably fifty such cases. I use this case because he is a respected and well-known citizen.

Mr. Stubbings said: Doctor, I wish you would take my son and teach him dentistry.

Ans. Has he a second class certificate?

Mr. S.: No. Does he need it?

Ans. Yes, if he is a Canadian.

Mr. S.: Well, all dentists in the Territories don't have that.

Ans. Oh, no. If you are a young man of the Territories wanting to start up in dentistry you have to have it, but if you are an American you don't need to be able to write your own name.

Mr. S.: Is that fair?

Ans. No, but it is North-West Law.

It is needless to say that Mr. Stubbings' son is not going to study dentistry. We are complaining about there being no opportunities for our young men. Yet we have made it practically impossible for them to learn the professions while we encourage illiterate foreigners to come in and take the places our own boys ought to have. This is what we have been fighting the Government on.

We want our own young men to get the best chance or an equal footing with outsiders. Mr. Haultain and Mr. Bulyea say, no, the young men of the Territories shall not be permitted to study dentistry and there is not a single dental student in the Territories today. A disgrace to the government, I say.

No doubt Mr. Bulyea thinks he scored me by publishing a letter I wrote. I did write it and probably a hundred more like it. And good advice it contains. What is wrong about telling a man to be sure of his location before spending his money? Why do I give that advice? Every man but one who was practising dentistry in the Territories when the law first came into force is still doing business in the same old stand. Since then fifty-four others have registered; one-half of whom have given up the ghost, some of them unable to find a place whereon to lay their head. Some \$1,300 contributed to the Dental Asso-

ciation for nothing. Is it a case for advice? Only two weeks ago a young man reported to me at the Winnipeg Dental convention that Mr. Harvey (presumably the Deputy Attorney General) had written him that "there were any number of towns in the Territories of over 1,000 population without any dentist." I refused his money, told him to go into the Territories and if he could find a single line of Mr. Harvey's letter true I would pay his registration fee for him. We have not got his application yet. He is still hunting on a return ticket. Our Association would have been \$50 richer had I wished. But is robbery honest? As long as the Government tells falsehoods to these people I expect to find it necessary to correct them.

Some men are gifted with "inherited treason" as Mr. R. B. Bennett put it and Mr. Bulyea's letter reveals the treachery of at least one man. As is now known to your readers a delegation waited upon Mr. Haultain on April 4th and asked for amendments to the dental law. Mr. Haultain promised us to get the law introduced and he promised his support. To this Dr. Size is witness. Referring to this Mr. Bulyea says:

"The doctor even took the trouble to submit his bill to Mr. Haultain for his inspection with a view, I suppose, of enlisting his sympathies for the measure. Mr. Haultain had his own bill in contemplation, that which he introduced and which was afterwards passed; but suggestion was made to him that he should father the doctor's little Bill."

Evidently Mr. Bulyea knows the intentions of Mr. Haultain towards us and what he proposed to do. Although Mr. Haultain had promised his support Mr. Bulyea assures us he was contemplating his own bill; a bill that dismissed us from office for misconduct. Five days before prorogation Mr. Haultain wrote to me as follows: "As there is every likelihood of our session coming to an end next week your Dentistry Bill should be intro-

duced without any further delay." Here at one and the same time we find Mr. Haultain promising us active assistance, preparing a bill, dismissing us for misconduct and writing to me urging me to hurry up and bring in a bill that he intended to knife. Is treachery a sufficiently strong term to apply to such conduct?

But the most extraordinary of Mr. Bulyea's statements is that in which he says the penalty was increased by expunging the penalty clause. The bill by which the penalty clause was repealed reads: "Clause 6 of Ordinance No. 6 is hereby repealed." That is every word of it. The clause that was repealed reads:

"After six months from the passing of this Ordinance any person not holding a valid certificate issued by the said clerk as aforesaid, who practices dentistry shall be guilty of an infraction of this Ordinance and upon conviction shall pay a fine of not more than \$100 and costs."

Your readers have common sense. Let me ask them how does the repeal of that clause increase the penalty or make them liable to imprisonment? It is the only penalty clause in the law and it is wiped out. Doesn't this reveal Mr. Bulyea's attempt at deception?

All these alterations in the law, every one of them, were made to let government favorites in. By reason of these changes men who could not read or write the English language, men who had never passed dental examination in their lives, men who as far as we know never studied dentistry five minutes in their lives, men who presented diplomas from a college that we can find no trace of (we have hunted for two years for trace of one Chicago college and we can't find it) have had to be licensed and we were compelled by law to issue the licenses. Do you wonder at our rebelling?

Now, sir, this is a very long letter but before concluding I must refer to Mr. Bulyea's expressed fear that I may contaminate the Dominion Council to which I am going. Let me advise him

that there is no danger. They are all long since contaminated with the same ideas of the North-West Government as I possess.

To give you an idea of how the highest thought in the nation views these things. I enclose a letter, in strict confidence, as it is private. It is from, as you can see, one of the leading professors in the biggest Canadian Universities. He says: "Dear Dr. Cowan—Glad to hear of the good news from your province. The Government went into a kind of politics that was not a success. May they get it put to them harder still."

There are some still more important pieces of crooked work which I will deal with on some further occasion.

Yours respectfully,

W. D. Cowan.

For the next two issues the papers were used by various parties belaboring the officers just dismissed. These were replied to, and taken all in all, it was really a dental period.

Then came the election. At that time the Government had offices over the Trading Company, corner S. Railway and Hamilton Street, and to these offices we were ordered to report and see the ballots counted. Remember the officers of the Dental Association had no part in the election excepting, of course, that we each had the right to mark a ballot and mail it to John A. Reid. In the offices sat Mr. (now Judge) Harvey; Jas. A. (now Senator) Calder and the returning officer, John A. Reid. The latter opened the ballots in the presence of all. It was to them a foregone conclusion that the officers would all be trimmed and they did not hesitate to express that opinion. Each voter had signed his own ballot which was kept confidential to the government. After about thirty ballots had been counted Mr. Reid exclaimed, "Well Cowan, here is one ballot that isn't for you. Oh, I see. It is your own ballot." Every one of the old officers was returned by an overwhelming majority. Referring to

it the next issue of the Standard said:

THE DENTAL COUNCIL

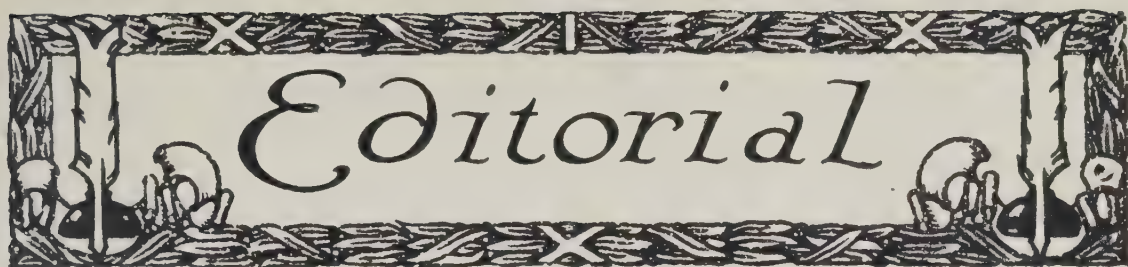
The new Territorial College of Dental Surgeons, created by the new Ordinance of last session of the Assembly, has just held its first election of council. Ballots sent out by the Government were filled and sent in to J. A. Reid, the provisional secretary, who opened and counted them up in the presence of Messrs. J. A. Calder and Horace Harvey. Each registered dentist had the right to vote for five councillors. One man cast his five votes for Edmunds, and it was allowed to go under protest. It is unreasonable to suppose that the law contemplated that method of piling up a vote.

The "Standard" is very pleased, in view of past criticism and discussion of the subject of dentistry in the Territories to see our aggressive and outspoken townsman, Dr. Cowan, at the head of the list, with Dr. Size a close second. They have worked side by side for a long time to place the profession on a proper footing. They have had to buffet the partiality and instability of the North-West Government. The holding of the election under the auspices of the executive looked like a preconceived plan to knock the old-timers out, but the result proves that they still retain the utmost confidence of their confreres.

Shortly after the election I met the Hon. F. W. G. Haultain and asked him what the programme was now to be. In effect he said he had given the dentists up as a bad lot but suggested that we now get together and get a law that would be satisfactory to all. This was done and we soon had a law which has given very good satisfaction (amended occasionally) ever since.

After it was all over the question arises as to the wisdom of the policy pursued. Some of the dentists thought it was unwise to be fighting the government; one of these, Dr. Coleridge, said so in a letter to the Leader. I

(Continued on page 225)



Editorial

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No. 7

Exercise and Recreation for Dentists

Dentists often receive advice in general terms on taking exercise, and even some times on recreation. Some writers would have dentists chop wood, attend the furnace, dig the garden, walk four miles a day; others would have them play baseball, tennis, golf, basketball, or even poker for both exercise and recreation. Without going into the philosophy of the subject, it is clear that the form of diversion from dental practice, must, in a measure, be governed by the surrounding circumstances and the physical and mental viewpoint of the person.

Muscles soon get out of tone and have a baneful influence on the function of the body without normal exercise. The higher or more specialized functions of the mind get out of order more slowly and return to normal more slowly. Exercise keeps not only the physical functions normal but indirectly the mental.

A busy dentist then requires daily exercise of a character different from that obtained in his practice, and also a mental exercise different from that found in his office. Experience has taught dentists that even these diversions are not sufficient to maintain normal bodily and mental health, but there must be every now and then a complete separation from

the regular routine of exercise, physical and mental. It does not serve the purposes of recreation to take a day off now and again, there must be a complete separation from the scenes and thoughts and associations of the routines of life to get recreation, and as years advance, recreation comes more slowly until finally not at all.

No young dentist intends to allow himself to come to the point of a physical or mental breakdown, but unfortunately it too often happens that practice increases and responsibilities increase until he finds himself working longer hours than he should. It takes courage to say to a patient who has honored him with a consultation, "You will have to come at a more convenient season, I must have a holiday."

The selection of the form of exercise and recreation must be studied out by each person for himself, having in mind some general principles as to physique, age, mental bias, and the fact that he is a dentist. No person can do fine finger manipulations following violent labors or exercises. Vigorous exercises should not be taken in the morning. Dentists cannot afford to play such games as endanger their hands or eyes. Finally, study the problem of exercise and recreation as it applies to you, and allow no amateur to dictate the kind of sport or exercise, physical or mental, to follow.

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Preventive Care of Temporary Teeth

F. L. SPIERS, D.D.S., BRANDON, MAN.

In all branches of the healing art, the forward word today is prevention. It is safe to assume that in no other branch of that art can more direct and effective methods be taken than in the field of dentistry. In the light of progressive research and advanced methods of technique it is imperative upon the members of our dental profession to awaken to the opportunity that knocks at our door. The public are asking and demanding greater knowledge in regard to their own health, and that of their kindred. It is up to us to educate, to eradicate mistaken impressions of the past and substantiate our plea for newer and saner methods by irrefutable arguments. If knowing the truth and recognizing day by day as we practise our profession that due to ignorance or mere apathy or procrastination that dental diseases are reaping their harvest of dire results and we do not lift our voices in protest or give that timely warning or advice called for, then we are not measuring up to our responsibility as professional men.

We all recognize today that in the past too much attention was given to the restorative part of our work—compared to that given to preventive methods. We were directed by the patient instead of directing the patient. If the patient had a limited amount of money for dental services and asked for an expensive piece of bridge work to restore a lost piece, he very likely got it. In the meantime he may have had a number of decaying teeth or other conditions upon which the same amount of money could have been much better spent with a greater service rendered.

But perhaps in no other branch of our work have mistaken ideas and impressions been prevalent than in regard to the care of temporary teeth. Somewhere in the past this name of temporary was given to the first set of teeth—creating the impression that because they were temporary and would be replaced by a permanent set, they could be practically disregarded so far as dental care was concerned. "Oh! this is Johnnie's first tooth—why worry about it or spend any money on the care of it, it will soon be lost and another will take its place," says the parent. Perhaps, we, as dentists, have been partly responsible for this idea. Child dentistry as practised by many dentists of the past was anything but desirable. Johnny or Mary was brought to us with a wracking tooth ache, already in an abscessed condition—the child was nervous, the tooth was painful and the parent was irritable and fussy, due to loss of sleep and anxiety and before relief was secured all parties concerned had a very pleasant time indeed. Thanks to modern education and newer methods and ideas in a considerable measure these cases have been eliminated but not entirely by any means. And so we must face the facts and ask the question—"What is to be done and how?" More child clinics both of the school and pre-school age, not only in our cities but in rural towns and villages, more dental literature and more talks to parents and children. But above all more personal and direct advice to parents as they bring their children to us for dental treatment. We should have in our own minds a very definite idea of why and when and how these teeth should be taken



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care of and impart such knowledge to the parent with enough but not too much talking. It is quite often more easy to demonstrate than to talk. How readily and easy it is to prepare a small cavity in a temporary tooth and fill it in the first part of the sitting and then later at the same sitting or a subsequent one show the difficulty involved in caring for the neglected tooth. Let me personally illustrate—While preparing this article a gentleman bundled four sturdy little chaps into my office, ranging from six to eleven years of age, and asked me to look over these children and do any work necessary. This man had once or twice previously brought the two older children for treatment and had been given advice. The eldest one had three small pit fillings in the six year molars which I had put in a year previous—all teeth were O. K. Number two had one small cavity in a six year molar and it was filled. Number three had two or three small cavities in the temporary teeth, which I took care of with no trouble whatever. The younger chap, seven years of age, had six or seven small cavities in the temporary teeth. The parent already understood that these teeth had to function for two or three more years and they were prepared and filled practically without pain and no trouble. All these children were dismissed from my office within an hour and a half and each mouth in splendid condition. These children are all eager to come back in the fall to have teeth re-examined and the parent is well satisfied.

I have personally used the following line of argument or reasoning when parents brought their children for dental treatment varied to suit the individual case.

(1). Decay in temporary teeth is as unnatural as it is in permanent teeth. Temporary teeth are lost through the absorption of their roots and are pushed out by the permanent teeth

which take their place. All temporary teeth are not lost at the same time. These teeth are given to the child for the purpose of mastication. Being the formative period of life the child must not only restore lost energy, but must provide for growth of bone and tissue. Hence thorough mastication is a vital necessity. Decayed and broken down temporary teeth impair mastication and tend to develop the habit of bolting food.

(2). Temporary teeth guide the permanent teeth to their proper position so that early loss of these teeth due to decay or prolonged retention pave the way for irregular and unsightly permanent teeth.

(3). The child suffers through impaired temporary teeth in proportion to what adults suffer from impairment of the permanent teeth. Most parents are willing to save their children from needless pain or suffering.

(4). If decay is allowed to progress in these teeth until the nerve is involved decomposition of nerve and pulp content takes place and abscess formation sets in. Poisons permeate the system which might seriously affect the child's general health.

(5). Broken down, cavernous temporary teeth become the incubators for all kinds of disease germs. They are quite frequently nothing more or less than miniature garbage cans standing directly at the portal to the little system. Dangerous germs may lodge in these teeth awaiting their opportunity to slide into the system and cause dangerous results. Clean and healthy temporary teeth help a great deal in curbing disease epidemics.

(6). Decay occurring in the approximal walls of the temporary teeth afford lodging place for food and give rise to decay in the adjoining permanent tooth.

(7). Early impressions are lasting ones and childhood is the habit-

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forming period. Temporary teeth in the majority of cases are easily cared for if taken in time. Small cavities can be prepared with little or no pain to the child. Early attention to these teeth create a favourable and lasting impression and future difficulty in having the child revisit his dentist is in a large measure solved.

(8). To the question that is so frequently asked by parents, as to the reason of rampant decay in their children's teeth some instruction

might be given in regard to diet. The question of whole wheat products, milk and nutritious bone building foods discussed. The question, diet for the mother and infant, the candy habit and several others might be dwelt on.

Other reasons and other instructions might be given but these to my mind cover the more important points, and while there is nothing new about it we might do well to give them a larger place in our thought and practise.

Western Canada Territorial Dental History

(Continued from Page 220)

am still of the opinion which I held in reply and which read:

To the Editor of The Standard.

Sir:—In last week's Leader there appears a letter from one of the gentlemen whom the Dental Association refused to register and to which only a very brief reply is necessary, as there are really only two points in it worthy of consideration. The gentleman referred to surrenders his whole case to us by admitting that he went to the Government and asked them to do unto all others just what we did to him. He admits by his act that we treated him just as he deserved to be treated; that we were right. Having capitulated to us there is nothing more for us to wish from him. The Government alone is now to be dealt with.

But I take strong exception to the policy he would have us follow. He insists that we did wrong in opposing the Government and implies that if we had got down on our haunches before the all important trio that run the North-West we would have received

all we wanted. Well, Mr. Editor, those who wish may follow that policy, but I for one decline to crawl at the feet of anyone. I'll scrap at any time for what I think is right, but as for cringing before superior (?) power to get it; excuse me. We have not asked for Government favors; we have not asked for legislative charity. We have simply asked to be placed on an equality with our fellows in the rest of Canada, a mere right, nothing less, and we don't have to cringe and crawl to get that right. There is altogether too much of this cringing around the North-West Government. It is the most abhorrent part of our legislative system.

In the letter referred to the statement is made that the Government distinguishes between those American colleges which belong to the National Association of Faculties and those which do not. I should not wonder if the Government adopts this as a means to get out of the corner it is in.

(To Be Continued)

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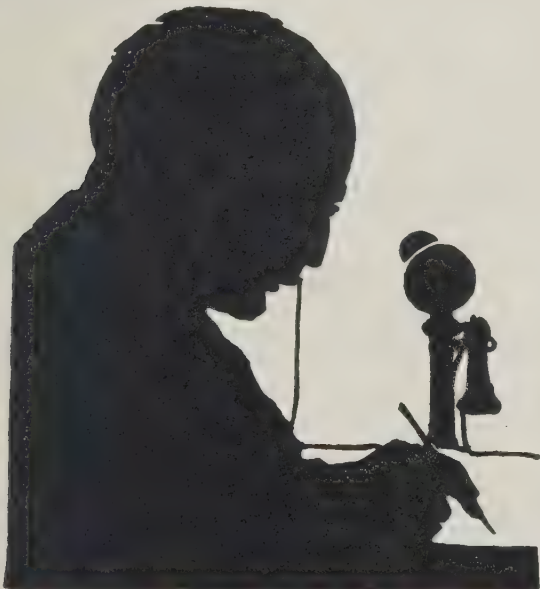
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Dominion Dental Journal

Vol. XXXIX

TORONTO, AUGUST, 1927

No. 8

ORIGINAL COMMUNICATIONS

Diet in Relation to Dentistry

ALEX. GEMEROY, D.D.S., EDMONTON, ALTA.

Read Before the Dental Society of Western Canada.

Over one hundred years ago, Lavoister declared that life is but a chemical function, and that actions are largely concerned with the conjugation of the verb "to eat". Without the fundamental idea of oxidation process of the chemical nature of food and the chemical reaction in digestion, visceral behaviour is a blank and without some understanding of visceral behaviour physical and mental behaviour is a blank.

There are few subjects of more importance to the well being of man, few subjects of more importance that can contribute to his well being and success than the selection and preparation of his food. Whatever laws and ordinances our forefathers may have provided for the dissemination of moral precepts and right habits of living in relation to human conduct, it certainly was not a sign of ancestral wisdom that so little thought has been bestowed on the teaching of what we should eat and drink, and that the relations between food and virtue, between processes of digestion—and state of mind which results from it, have

occupied a subordinate place in the practical arrangements of life. There is no doubt that there always have been a few enlightened persons who have recognized the simple fact that a man's temper, and consequently many of his actions, depend upon whether his digestion is good or not, whether the meals which he eats are properly converted into healthy material and suitable for the work of building both muscle and brain, or whether unhealthy waste products pollute the course of the nutritive supply of his system.

The truth of these facts has never been admitted to an extent at all comparable to their exceeding importance, and strange as it may seem no practical results on the living habits of man have resulted from a consideration of such facts even in the least degree commensurate with the greater significance which they contain. The reason for this state of apathy no doubt consists in the fact that an adequate recognition of the value of proper food to the individual in maintaining health, and in prolonging life, and thus

largely promoting cheerful tempers, prevalent good nature, and refined moral tone, would require almost a revolution in the habits of the majority of people.

The science of diseases, which is pathology, has proved a number of things—not so many as the pathologist claims, but a number. One of these absolutes is that diet errors and excesses are active contributing agents to various of the degenerative organic diseases that lay low so many men just as they are nearing sixty, or soon after they have reached that stage of life—diabetes, for example and Bright's disease and digestive troubles. It is the opinion of many men that diet excesses and errors are responsible for 90 % of all diseases, one way or another, either actively, in a sense of producing them in the body, or sub-actively, in the sense of making the body low in resistance and more susceptible to them than in the case of the properly nourished person.

The most important thing in any man's life, from birth to death, is the food he puts into his body; and the most important thing about his food is, first, the quantity of it, and secondly, the quality of it. By quality I do not mean its richness nor its delicacy, nor its epicurean status, but do mean its proper selection and preparation. The best and finest food obtainable, poorly prepared and taken in improper combinations is of less use to the body than the coarsest and commonest properly prepared and properly combined. A meal consisting of a green salad, a dish of boiled spinach, a piece of whole wheat bread, and a glass of milk, for example, would excite the average men to jeers and sneers, but it would be of far more use to him in the way of nourishment than any meat, vegetable, dessert and trimmings combination that could be prepared by the world's most famous chef.

All this is trite enough. Food has always been the first concern of man, and always will be; rarely in a scientific sense, but always in a hunger and appetite sense. Nature has made that imperative. If you do not eat, you die. Also because of the massing in of civilization with food, if you do eat, you die. The difficulties seem insufferable, but they are not. Civilization has done many things for food, just as food has accomplished much for civilization. The break is fairly even. Broadly speaking, the food we now have is intrinsically all right. Perhaps as much may be said for civilization. The trouble with both food and civilization is not the raw materials of them, the basic principles, but the vast perversion of them, under guise of improvement, that have been brought about by the persons who must consume the one and are supposed to conform to the other.

We know one hundred times more about food than we did twenty years ago. If we maintain this ratio of progress for the next fifty or sixty years, and devise some means of sinking that information into the minds and putting the right food into the stomachs of the people, we shall have done more for the physical well being and consequent happiness and advancement and longevity of the human race than has been done since some curious and investigating ancestor away back in the Pliocene days discovered he could make fire by rubbing two sticks together.

A considerable number of things have happened in this world from then to now, but that was easily the most important. The next most important thing is to get the inhabitants of this fire-blessed globe to eat properly. We haven't achieved that as yet, and it will be years and years before we do; but when we do, a very large portion of our physical and mental ills will have vanished. That situation being reached, there

we are with the millennium sitting comfortably on every doorstep.

When we began the scientific study of food, we opened up a field for the crank, the faker, the quack, the charlatan, the fanatic and the plain ordinary, but numerous, nut, and these gentry invaded it from all sides. The scientists worked in their laboratories, but the food fakers and faddists worked right out in the open. While we made our slow and painstaking progress in the study of metabolism, the "surest thing" food fakers hopped promptly to the front and centre with all sorts of food panaceas and schedules and formulas, ranging from dessicated hay to raw carrots. Some eliminated all food and shouted that fasting is the catholicon. Others filled their patients to the ears with sea-weed and bran. The country is all cluttered up with food faddists and professors, each shouting that his scheme is the only way to digestive salvation.

Heaven knows, that we need digestive salvation sorely and sadly, but we will never get it by limiting our sustenance to these fad formulas any more than we will recover it by continuing on the eating course that lost it for us. The great difficulty in discussing any food problem is that every component of a formula is as arbitrary as the day of judgment. He is all right and everybody is all wrong. Now, food, save in its broad principles, is as individual a personal problem as having a stomach ache. The only rational way to deal with it is to lay down a few basic tenets and leave each person to work out his personal application of them.

We accept discoveries in other fields and utilize them. We grab at new things in every science save the science of food. We are avid over the radio, for example, and take every step forward with the scientists who are delving into the mys-

teries of the air; but let a scientist who has worked for years in a biological laboratory say that his experiments have shown that certain proportions of carbohydrates, proteins and fats should be observed in preparation of meals, and we shout that it is all bosh, and that we must have our food as our fathers had it before us. We must have our food! And we get it. Also we get our fat paunches, our multiple chins, our creaky knees, our congested colons, our poisonous gases and acids, our appendicitis, our hardened arteries, our high blood pressures, our broken down kidneys, our engorged livers, our impaired hearts, and so on, to a catalogue of infirmities which are almost interminable.

It is pathetic—this food complex. We must have this, and we cannot get along without that. Not that we have ever tried, of course. Far be it for these eaters to investigate a little and see for themselves if possibly there is something in all this food talk that has come up lately. We are fundamentalists in food—most of us. We believe that we must have meat and potatoes and pie—lest we perish. We cheerfully admit that a skilled electrician knows more about electricity than we do; that a skilled surgeon knows more about anatomy than we do; that a scientific specialist knows more about his speciality than we do;—save as to food. With food, we are deep wells of wisdom ourselves. Some biologist, who has given much study to the value of foods, announces that certain vitamins are necessary to well balanced rations, and we rise up and give him the coarse hoot. The villain is trying to deprive us of our meat and potatoes, and bread and pie!

Nevertheless, there are certain facts relating to food that are deserving of consideration. I have no intention of going into the science of food save in a general way. I think that many a food expert is so obsessed by his own theories that he

pays no attention to the useful and rational facts. What I want to say is this. If the average individual will assimilate and practice the following few and simple facts, that person will feel better, be better, live longer, be of more account to himself, and others, and have more fun out of life than he does now, and that goes as it lays without regard to the present condition of said individual, whether good, bad or indifferent.

First, cut down the amount of your food. Don't eat so much. Eat what you like and what agrees with you, but diminish the intake. Do this gradually. Do not do it all at one jump. Get yourself accustomed to this decreased supply. Eat meat only once a day. Eat much less bread—particularly hot bread and such stuff. Be careful about mixing the acid fruits and starches. It would be wise to also avoid mixing your proteins and starches. Take plenty of fruit of all kinds, but eat it by itself, as often as you can. Eat only lean meat—not fat meat, and never any kind of meat more than once a day.

Second. Eat a green salad twice a day, for luncheon and dinner. Lettuce, water cress, celery, raw cabbage (which is one of the very best of green salads) or whatever green stuff you can get. Lettuce and tomatoes are fine. Let this salad be a good, generous helping. Don't skimp it. If you can accustom yourself to the California method of starting a meal with a salad—do that. It tastes better when it is served first, and it does more good. Use a little oil in the dressing. Try with half a lemon squeezed over it, and a little salt and pepper, if you like. But eat two green salads, sure.

Third. Eat at least one dish of cooked green vegetables each day—two dishes are better—such as spinach, beet tops, green beans, carrots or some similar vegetable. Three or

four heaping tablespoonfuls. Never neglect this cooked green vegetable. Always one dish a day at least.

Fourth. Be chary about your sweets. If you like pie, cake, ice cream,—take them, but in very, very small portions.

Fifth. Take your tea and coffee without cream, milk or sugar. Use a slice of lemon with your tea.

Sixth. Drink at least six—preferably eight—glasses of water a day, and always take a glass of cool—not iced-water before breakfast, soon after you get up. Drink water with your meals, or not, as you prefer, but do not flood your food with water. A glass per meal is enough.

Thus, we come to the important phase of this discussion, which is the relation of diet to dentistry.

You all have observed the boy or girl, fourteen to sixteen years of age, who is not physically vigorous, is somewhat under average weight for his age and size, who develops at this time of life a number of white spots on the surface of some of his teeth, and for no apparent reason one of these white spots breaks down into a cavity. You feel that the matter of the child's diet has something to do with this condition. Dr. Percy Howe has carried on some very intensive research work along this line, and has given us some interesting and highly enlightened information on the subject. I shall deal first with his discussion of vitamins.

Nobody knows the chemical nature of vitamins, but that need not trouble you seriously. Nobody knows the nature of electricity, but we employ it to light our homes and draw our trains. We know where to find it, and how to use it. While the vitamins have not been chemically isolated, we are learning something about where to find them and how to apply them. We need to know much more, but the knowledge will likely come in due time. About all

you need to know about vitamins is that they are found in connection with the processes of life in plants and animals. That they are more or less completely destroyed by what-ever destroys those life processes. That they are probably present only in very small quantities, even in the foods which are richest in them. That probably not more than two of them are likely to be deficient in our children's diet at the present time, and that these you can easily supply in foods which you can persuade the youngster to eat, and which they will finally come to like.

Modern chemistry has refined many forms of food, and we have been educated to prefer refined foods to the primitive and simple forms. Every refining process is more or less destructive to at least some of the vitamins which were in the original food material. There are important vitamins in animal fats, such as butter, but rendering those fats into lard so completely destroys the vitamins that very serious consequences result if an animal is fed for a long time upon a diet which contains no animal fat except lard.

Very important vitamins are found in the germs of the grain, that is, the part which will grow if planted, but modern methods of refining completely destroys these vitamins, and white flour contains no vitamins. Vitamins of the greatest importance are found in the green leaf vegetables as they come fresh from the garden, but at least one of the most important of these vitamins is either killed, or greatly reduced in efficiency, if such vegetables wilt or are kept in cold storage. This does not mean, however, that the cold storage process is not a very valuable means of storing some forms of food.

A knowledge of what wilting or storage does to these tender vegetables is not confined to man. In fact, the animals knew it first. If we

placed fresh lettuce and either wilted or storage lettuce at the same time before the animal in our laboratory, not only will they neglect the wilted lettuce for the fresh, but they seem to feel that the wilted lettuce is suitable only for bedding and they contentedly trample upon it, while eagerly devouring the fresh. Fresh whole milk contains important vitamins, but the pasteurizing process either destroys one of the most important of these vitamins or greatly lessens its efficiency.

Fortunately, it is still possible to get foods by means of which you can add the necessary vitamins to almost any diet, without much trouble. Chief among such foods are oranges. The habit of drinking orange juice is increasing and is, undoubtedly, beneficial, but the benefits would be much greater if people would eat all of the orange, except the outer portion of the skin, because the cellulose which forms the inner part of the skin, the partitions and cell wrappings, lightens the mass in the intestines, improves the muscular tone of the intestinal walls, and acts as a scrubbing brush to keep clean the oranges by which the food material is absorbed in the intestines. It is well known that lemons are rich in such vitamins. All that you need to do is to get the children to like the foods which do not have to be cooked, of which, in addition to those given above, you will think of apples, pears, peaches, grapes, lettuce, celery, and raw cabbage. Have them eat plenty of butter. You will note that I have said nothing about taking away any articles of food. If you can get the children full enough of the things which have been mentioned they will have less room for the refined foods and may not note their absence. If the children cannot get the raw milk, you can compensate for the damage in pasteurizing by seeing that each

child gets at least one or two oranges a day. Most children are very fond of white bread, but if you discontinue hot biscuits and toast you may be able to wean them away by bran gems, made from the following recipe:

Mix together 3 cups of bran, 1½ cups of whole wheat flour, three level teaspoonfuls of soda, 1½ level teaspoonfuls of salt, add a cup of molasses, 1½ cups of sweet or sour milk; raisins and nuts to taste. Bake in gem pans. Makes 16 gems. Let them pile on plenty of good butter.

Please bear in mind that we know but little about vitamins, and have much to learn. We have worked out for our animals in the laboratory a normal diet on which they do very well. If for a period of sixteen days we entirely remove a certain vitamin the animals will all develop disease, and in three or four weeks they will die. However, if at the end of fifteen days we put this vitamin back, they quickly get well. If we feed them half the amount required for health, they are half sick

and half well. The average person's diet is believed to be deficient in this particular vitamin to such a degree as to lower the physical resistance and cause many people to fall victims to disease more easily than they would if they received this vitamin in sufficient quantities. Deficiency of this particular vitamin may be greater in well-to-do homes, where refined foods are used, than in homes where liberal quantities of green food are used.

In the average child's diet two of the vitamins are likely to be deficient (because investigators recognize five different vitamins). One of these vitamins is Vitamine "A," and it is frequently referred to as "fat soluble A". It is important, but not so important as the other vitamins. Vitamine "C", generally known as "water soluble C", is the

most important and, fortunately, we know enough about it to make practical applications of great value. We may safely pass by without much attention this time three other vitamins, which are called "B," "D" and "E". What little we know about these probably does not apply to the condition under discussion. Vitamine "C" is found in greatest quantity in fruits and vegetables which are grown outdoors in open sunshine, as well as in whole milk which has not been pasteurized. The more sunlight, the better the fruit seems to be in this respect. For instance, oranges, lemons, grapefruit and pineapples are the best known sources of this vitamin. Nearly a year of tropical or sub-tropical sunshine is required to perfect the chemistry of these fruits. Fruits and vegetables grown under glass are not good sources of this vitamin. Among the vegetables, tomatoes, raw cabbage, lettuce, celery, and raw carrots are excellent sources of vitamin "C". It is especially worthy of note that all these fruits and vegetables may be eaten raw. You will find young fresh carrots eaten raw very palatable, or grated carrots may be included in some salads. Carrots have proved very valuable in restoring or maintaining the health of experimental animals.

One of the most ordinary illustrations of the destruction or reduction of this vitamin by heat, or drying, is connected with pasteurizing milk, or drying it into powdered form. Please do not understand me to say that the pasteurization of milk is not important, or desirable, under certain conditions. The milk for a great city must come from many sources and no vigilance on the part of the inspectors can keep all these sources clean, or the cows healthy. If my milk is to come from unknown sources I prefer to have it pasteurized, because I can compensate for the loss of vitamin "C"

by taking enough orange juice. Some dairies, however, keep only healthy cattle and handle milk by such sanitary methods that it does not need to be pasteurized. This milk is sometimes sold under the name of "certified milk" or some other special name. The importance of such milk as a food for growing children cannot be overstated.

Any animal which is deprived of a sufficient quantity of vitamine "C" for a sufficient time will develop scurvy. Scurvy is the disease that afflicted sailors who were a long time at sea without fresh food. You probably imagine that the disease had disappeared. It may astonish you to know that in the opinion of some very careful students a mild form of scurvy is common among people of today, especially the rich and well-to-do. The symptoms are not sufficiently well marked to be recognized as scurvy, but they are of tremendous importance because they may comprise retarded growth, warping of the body structure, lowered vitality and ready susceptibility to colds, and more serious forms of illness. These students base their belief upon the symptoms which are produced in animals by a slight known deficiency of this anti-scurvy vitamine "C" over a long period, and the astonishing similarity of the symptoms in many people. These symptoms can be produced in guinea pigs and monkeys by continuous feeding of such a diet as is found in many well-to-do homes.

Many breakfasts for both adults and children consists of a cooked fruit, a refined cereal, pasteurized milk or cream, and perhaps bacon and eggs. There are many necessary food elements in such a meal, but it lacks the foods that contain this anti-scurvy vitamine "C", and if you feed that diet long enough to a healthy monkey, who lives in a clean, comfortable cage, he will develop scurvy. This meal can be cor-

rected by substituting a sliced orange with a cooked fruit, but this should be taken at least half an hour before the rest of the breakfast—one hour would be better, and using a whole wheat cereal in place of a refined one.

We have devised for our animals what we call a normal diet, over-balanced ration and on this they grow, remain in health for long periods, and reproduce normally. Then we change the diet of a group of animals on normal diet. If we entirely remove this anti-scurvy vitamine "C" from the food of laboratory animals they can be kept alive no longer than four weeks, even if the diet is perfect in every other respect. If the otherwise perfect diet bears just enough of the vitamine "C" to keep them alive, the most astonishing changes take place. Death does not come immediately or completely, as with entire deprivation, but it comes creeping on slowly, insidiously and progressively, until it involves all the bony structures, including the teeth. Even the enamel, which is the hardest and perhaps, the most resistant tissue in the body is affected.

The particular form of starvation, which is scurvy, dissolves the soft organic parts of the bone and teeth. In bones and teeth there is an organic matrix or framework, and the mineral salts, which give stiffness and hardness, are held in this organic material. Even the enamel has such a framework, and evidence has shown that there is more circulation in the enamel than we have supposed. When the body is deprived of enough vitamine "C" for a long enough time something happens to this matrix, perhaps in tiny spots here and there throughout the body, and if the deprivation is sufficient the matrix will break down. Dr. Percy Howe believes the white spots on the enamel of children's teeth to be food deficiency spots, in-

dicating a change in the organic matrix of the enamel. In the one tooth where a cavity has formed, the matrix has broken down. He believes that by means of a well balanced diet, which would include a sufficient quantity of vitamine "C", the matrix can be restored to health where it is not too seriously affected.

A dentist who has been in practice for twenty-five years and whose patients are from well-to-do families has this to say regarding the condition mentioned above. He shares in the opinion held by many others that the quality of teeth is deteriorating, and that decay is on the increase. The strictest oral hygiene is unavailing for those patients who develop the white spots along the age of about 14 to 16 years. When these spots break through the teeth decay with appalling rapidity. Cavities develop where cavities should never occur. In a few cases in which he has been able to interest the children themselves in the daily use of liberal quantities of oranges and green vegetables, the trouble appears to have been arrested.

We have been taught to believe that there is no circulation in adult enamel, and that it cannot be reached from within for either harm or good, but can be attacked only from without, and must then depend upon its inherent strength for resisting power. That belief has led to the organization of prophylaxis on three foundation stones—cleaning, polishing and massage—and to the slogan "Clean Teeth Do Not Decay"—meaning clean in the usual and not in the surgical sense.

Percy Howe says that there is reason to believe that enamel is something more than a bundle of calcified rods glued together; that it has an organic matrix and probably some form of metabolism and can be reached from within; that it may be affected by serious nutritional deficiencies to such an extent that it

may break down without attack from outside, or cannot resist such an attack; and that it may be possible by maintaining nutritional balance to strengthen the enamel against attacks from without. In the light of these statements Dr. Percy Howe proposes for the profession a new and better slogan: "Healthy Teeth Resist Decay—Sick Teeth Invite It."

If these beliefs can be supported by incontrovertible evidence, they put a new face on the whole problem of the protection of the teeth, and they open to the dental profession the greatest opportunity it has had. They make it possible for the dentist to become a diagnostician and advisor, whose services will be of unexcelled value.

The deficiencies which manifest themselves in the dental apparatus of the child are generally, in part at least, results of deficiencies in the diet of the mother before the child is born, and wrong feeding of the infant. It is more and more the duty of our profession to take care of the dental conditions of the expectant mother. The diet which will protect her teeth against the heavy demands of the period is the very diet to supply materials for the bones and teeth of the foetus. We have opportunities to tell our story again and again and to link it to the health of the mother at the time, and to the health of the child in the future. We shall be able to suggest the diet which in normal cases will meet all our food requirements.

More and more, children are being brought to us for dental care when very young, and this practice will increase. We should be able to diagnose at least serious deficiencies, and, in cases where there is no reason to suspect pathological conditions, to indicate to mothers the simple diet necessary to correct the deficiencies which occur most frequently. Against the period of sus-

ceptibility, which very often occurs around the age of 16 or 18, when mouths show sudden serious attacks of white decay, we should be able to establish high resistance with correct diet. Dr. Percy Howe says that he hopes to sometime show us that we would be able to increase also the resistance to periodontal debility and resorption on the part of any

adult patients. Every increase of resistance against oral disease must be also an increase against systematic disease. Was it something like this which Dr. Charles Mayo had in mind when he said that the next great advance in medicine would come from the dentists, and wondered whether we would take it?

Some Interesting Cases Seen at the Lockwood Clinic

W. AUBREY CRICH, D.D.S., L.D.S.
Salivary Calculus in Wharton's Duct.

Patient came to the Clinic on May 12th, complaining of pain and swelling on the lower right side of his mouth.

Present History—After having eaten a salad containing much vinegar, on the previous Friday evening, he had noticed the floor of his mouth begin to swell and had experienced a good deal of pain. Following his meal, the swelling seemed to disappear and the pain left. This condition of swelling followed by pain, returned on eating breakfast the next morning, and did so with each successive meal. The last few days the swelling had not all disappeared after finishing his meals, and he had noticed the glands in his neck had become swollen and very hard on palpation. Patient complained of some tenderness in the lower posterior molar on the right side. Hot foods seemed to aggravate the condition, while cold water or a cold compress relieved the pain. This condition had been gradually growing worse, and the night before coming to the Clinic he had slept very little.

Previous History—Patient said that he had experienced a similar attack in January, 1924, but at that time it had not been nearly so severe. He had gone to a dentist, who had removed roots from the lower first and second molar areas on the opposite side, and two days following this, his condition had begun to clear up.

Examination—On examination, the floor of the mouth on the right side was reddened, swollen and very painful to the touch. The lower teeth on this side all appeared vital and were not tender to percussion. Patient did not complain of any trismus. Gingivitis was present throughout the mouth.

The submaxillary, sub lingual and cervical glands of the neck were swollen and hard. On pressure, pus could be expressed from Wharton's duct, and also from the duct of the sub lingual gland, but no stone or nodule could be palpated.

Dental radiograms were taken of the teeth on the lower right side, and a bite film was exposed by placing the film between the teeth and focus-

ing the rays up through the floor of the mouth. X-rays of the teeth were negative but a small calcified area or nodule could be seen on the bite film. (Fig. 1.)

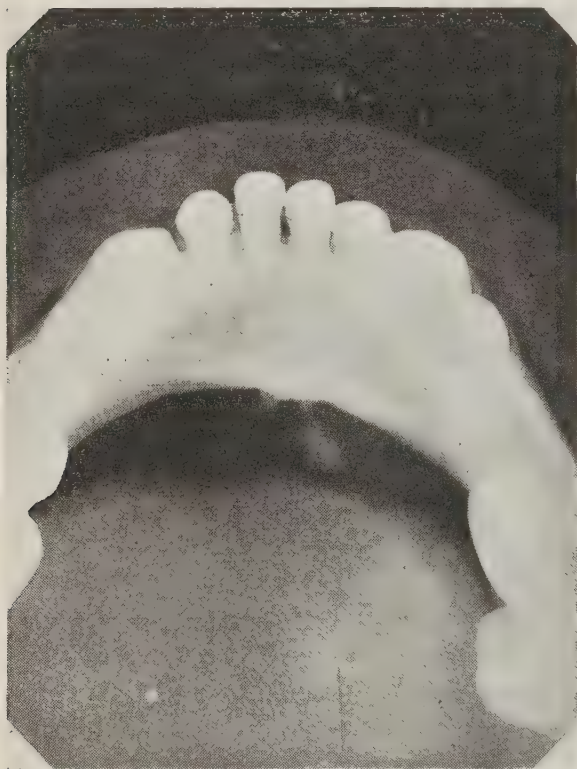


Fig. 1—Bite Film.

Diagnosis—A diagnosis of salivary calculus blocking Wharton's duct was made.

Treatment—The patient was referred to "Dr. Moher"—the Ear, Nose and Throat specialist of the Clinic. The floor of the mouth was cocainized, the duct dilated and a probe passed. No calcareous object could be felt. On dilating the duct some pus was liberated and this immediately eased the pain. Hot saline mouth wash was recommended, and further, dilatation of the canals the following day. On May 13th, patient returned feeling much better, the tenderness, redness and swelling being greatly reduced and the sub lingual gland had decreased markedly in size. Ducts were again dilated and a dram of pus evacuated. The patient was advised to continue the use of the hot saline mouth wash, and also, to massage the gland in the direction of the

duct. The following day, May 14th, the stone was expressed, (Fig. II.), and since then all discomfort has entirely disappeared.

Discussion—Regarding the patient's previous attack, it is difficult to say whether or not it was of the same etiology. It does not seem likely that there was a stone blocking the duct, and that it possibly became dislodged,

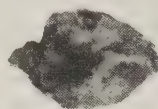


Fig. II—Showing Cut of Stone Double Original Size.

passing back into the gland and allowed the secretion to escape. From the size of this nodule, it seems logical to suppose that it had been there for some time.

A Case of Severe Stomatitis—

Patient came to the Clinic on February 11th, with a severe stomatitis, involving the buccal membrane on the right side of his mouth.

Family history was negative, and he had never had any previous illness.

Present History—Patient said that one week before, he had bitten his right cheek while eating supper. Following this, his right cheek began to swell and became very painful. He saw a doctor who advised the application of heat, and this seemed to reduce the swelling slightly.

Examination—The patient presented on examination, an extensive swelling of the face on the right side. The soft tissue was markedly swollen, hypertrophied, and hard on palpation. The patient was not able to bring his teeth together on account of the tissue of the cheek coming between the occlusal surfaces of them, and for this reason, had been existing on a liquid diet for almost a week.

Distinct imprints of the teeth could be seen in the swollen tissue on the right side. There was a large

ulcerated area in the soft tissue in which the upper third molar rested. Some trismus was present. Patient was not certain, but was of the opinion that the upper third molar had just erupted.

The whole throat appeared reddened and the tonsils were large. Stenson's duct seemed to be functioning properly, so that the possibility of a stone in the duct or gland was excluded. Patient gave a history of having been exposed to venereal disease, so it was thought advisable to prescribe potassium iodide until the Wassermann report could be obtained. On account of the trismus present, dental radiograms were not taken at this time.

Treatment—The ulcerated area was swabbed with 10 per cent. mercuriochrome, a warm saline mouth wash was advised, as well as the application of heat to the outside.

The patient returned to the Clinic two days later, but there was little improvement to be seen. Radiograms were taken at this time. The lower first molar had been devitalized and there was marked bone destruction to be seen at the apices of both roots. There was much bone destruction of the alveolar crest present, around the second and third molars, and both of these were loose. Extraction of these teeth, along with the upper third molar was indicated, but their removal was postponed, hoping that conditions would improve. The Wassermann report was found to be negative. Patient was advised to continue the use of the mouth wash, and also the application of heat.

On February 25th, it was decided to remove the questionable teeth, and this was done under conductive anaesthesia. Following this, the mouth condition improved very rapidly.

On March 9th, patient was feeling much better, and all of the swelling had disappeared.

A Case of Neuritis of the Second Division of the Fifth Nerve—

Patient a woman, aged 52 years, came to the Clinic on March 24, 1927, complaining of soreness on the upper left side of her mouth.

Clinical History—Patient reported that her upper teeth, which had been very badly infected, had been removed six years previously, with the hope that it would relieve her of some very severe headaches, which she was then experiencing. These headaches seemed to start in the left cheek in the region of the left eye and would radiate back behind the left ear. Removal of the upper teeth had not benefitted this condition, and soreness of the mouth in the upper left buccal area had set in directly afterwards. The soreness was in the form of a dull aching pain, which seemed to be present continually. Patient had had three dentures made, but could not wear any of them except for very short periods of time each day.

Examination—The oral mucous membranes appeared normal, and dental radiograms of the mouth were negative for retained roots. The denture had been well made and was not found to be impinging on the tissues in any place. No demonstrable foci were present.

Diagnosis—A diagnosis of neuritis of the second division of the fifth nerve was made. This was confirmed by injecting 2 ccs. of 2 per cent. novocaine in the region of this nerve. The patient was immediately relieved and reported that she had been quite comfortable for two hours following this.

Treatment—On March 28th, a deep alcohol injection was done to block off the division of this nerve—2 ccs. of 95 per cent. alcohol being deposited. Patient had some slight discomfort for a few days following this, which was to have been expected, but was able to wear her denture continuously.

Patient was seen again one month later, and at that time was still quite comfortable.

Discussion—It is difficult to say the length of time which this patient will be relieved. *Adson in reporting a series of fifteen hundred and seventy cases, which were treated with alcoholic injections for trifacial neuralgia, found the average period of relief from pain to be seven and seven tenths months.

A Case of Trismus of an Hysterical Character, following an Extraction

Patient came to the Clinic complaining of trismus and gave a history of having had a lower left molar removed ten days previously. After a good deal of questioning, it was decided that this had been done under conductive anaesthesia. Patient reported that he had not experienced any undue post operative pain, and that the wound had healed nicely. On the sixth day following the extraction, his jaw had seemed to become stiff and he had experienced much difficulty in eating. At that time he was only able to open his mouth sufficiently to permit the entrance of a thin wafer. This was the only complaint which the patient had, and he had never been troubled with any rheumatic conditions.

Examination—On account of the patient's condition, it was difficult to make an oral examination. There was no swelling or any adenitis present. By forcing the mouth open slightly, two small dentures were removed, and while doing this, the patient complained of pain in the temporo mandibular joint on the left side.

Diagnosis—A diagnosis of trismus of hysterical character was made.

Treatment—Patient was given nitrous oxide, and while in the analgesic state, his jaws were forced apart and he was then allowed to

wake up, performing the act of opening and closing his mouth. The patient reported two days later, that his jaw was still a little stiff, but that he experienced no difficulty in eating. The patient was advised to use chewing gum to exercise his jaws, and since then he has been absolutely normal.

Peculiar Case of Dental Origin—

Patient came to the Clinic complaining of a peculiar feeling in the region of her left antrum, a sensation as if there was something present which seemed to move a little when the head was jarred. She had first noticed this on descending some stairs. The upper teeth had been extracted seven years before, but no post operative X-rays had been taken. Two years previously she had experienced a similar sensation on the opposite side of her mouth, but at that time a small root was to be seen just breaking through the tissue, and following its removal, she had been entirely relieved of her symptoms.

Examination—On examination the oral mucous membranes appeared healthy and there was no outward evidence of anything abnormal. Transillumination of the antrum on the left side was negative. Dental radiograms were taken of this area and a root was located. (Fig. III.)



Fig. III.

Treatment—The root was removed under conductive anaesthesia by the flap method, after which the symptoms disappeared and the patient has had no complaint since.

*Trifacial Neuralgia and its Treatment—Northwest Medicine, May, 1923.

Stiffness of the Jaw Due to Severely Impacted Lower Third Molar—

A man aged 42 presented himself at the clinic on February 18th, 1927, complaining of a stiffness of the muscles of the jaw on the left side. He had first noted this condition two years before, and had also thought that he had noticed a small amount of swelling in this part. He did not complain of any definite pain but said that there seemed to be a vague discomfort present all the time.

Examination—Patient was a well nourished individual and his physical examination was essentially negative, except that his blood pressure was a little low, the systolic being 118, while the diastolic was 70. Two impacted lower third molars were found and one devitalized tooth, which was X-ray negative. (Fig. 1V.)

On not being able to account in any other way for the patient's symp-

toms, he was advised to have the impactions removed. The distress being on the left side, he decided to have that impaction operated first, and this was done elsewhere shortly after finishing his general examination. A few days later he reported that his symptoms had entirely disappeared and he has been entirely free since then.

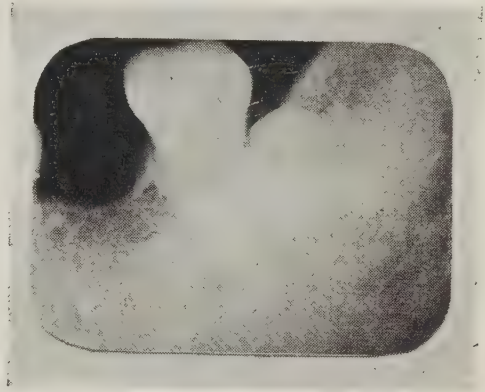


Fig. IV.

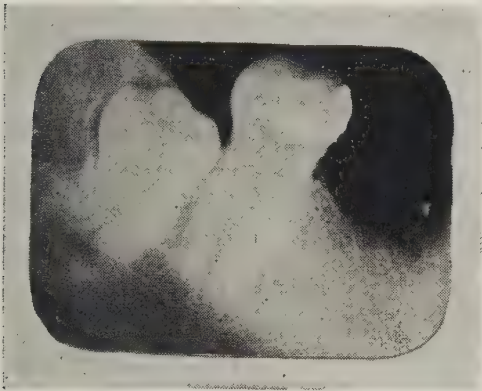


Fig. IV.

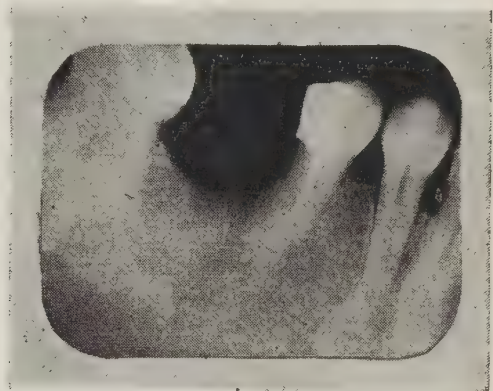


Fig. IV.

President's Address

JOHN CLAY, D.D.S., PRESIDENT OF CANADIAN DENTAL ASSOCIATION.

Read Before the Canadian Dental Association.

The honor and pleasure has been given me of presiding at this meeting of the Canadian Dental Association and speaking officially for it on this occasion. It is fitting that my first words should be ones of welcome to the members who have come from all the Provinces of our Dominion from the Atlantic to the Pacific. On behalf of the Officers and Executive, I welcome you to the present sessions of the Canadian Dental Association.

We confidently hope that this meeting will enlarge the fraternal feeling of the members of the Association, and that we will return to our homes inspired with a higher professional spirit, as well as with a wider knowledge of the science and practice of dentistry.

Last year your Association met in Halifax as the guests of the dental fraternity of that city. Those of us who attended the meeting were delighted with the beautiful surroundings, the quality of the programme provided, and the kindness and courtesy with which we were entertained. Through the modesty of Dr. George Kerr Thompson, the President, who was one of those who labored for our benefit at that time, no recognition in the President's address was made of this fact. In addition to the vote of thanks passed at the time, I should like to record publicly our appreciation of the unselfish work of the Halifax Dental Society on that occasion.

This year we meet here in the City of Toronto as the guests of the Ontario Dental Society. Sixty years ago the agreement of Upper and Lower Canada marked the commencement of that process of union which later resulted in the formation of the Dominion of Canada. On this occasion

we celebrate the 60th Anniversary of the Ontario Dental Society—the same age as our Dominion — which has grown in these years from a feeble beginning to a well-organized society of large proportions. This present meeting is a splendid material expression of the ability and professional spirit of the Dental Profession of Ontario.

The C. D. A. is under a debt of gratitude to the Ontario Society for its kind hospitality, which makes possible the meeting in Toronto of our Association. The officers and members appreciate the opportunity afforded them of being present at the celebration of the 60th Anniversary of the Ontario Dental Society and extend their best wishes for the future.

Last year in Philadelphia many of us were fortunate in being present at the meeting of the Seventh International Dental Congress. It was a significant occasion for the dental profession of the United States of America. The Tercentenary of a great Republic was being celebrated at the place of its birth, and it was fitting that the American Dental Association should at that time and at that place act as host to the Dental Profession of the countries of the world. The kindly hospitality and untiring efforts for the advancement of professional knowledge on the part of our hosts spread abroad a great wave of friendship and inspiration which reached to the far corners of the globe.

We, the members of the C. D. A., owe much to our confreres to the South of us. Whether we go to visit them or whether we ask them to come over and help us, the response is the same.

We are largely indebted to them for the generous fraternal spirit which prompts them to give freely of time and energy so that the knowledge they have acquired and the experience which they have gained may be of equal benefit to us as to themselves.

I would like, however, to turn your attention for a few moments to the Canadian Dental Association. It is my purpose to confine most of my remarks to a frank recognition of the shortcomings of the C. D. A., to a resume of what appears to me to be the underlying causes for our deficiency, and to as strong a plea as I can offer for the united effort of all the members of our profession to keep alive and develop an all-Canadian spirit in dentistry.

In the midst of the numerous anniversaries and birthdays which we are being given notice of from all sides, it is interesting to recognize that this is also a time of anniversary for the C. D. A.

It is now just a quarter of a century since the first meeting was held in the City of Montreal. As with Confederation, so with our Association: the leading part in the initial efforts was taken by the men of Upper and Lower Canada, with strong support from the leaders of thought in the Maritimes. Men of vision and energy were responsible for its inception, and we should not fail to appreciate their efforts. Our Association has functioned under great natural difficulties and there have been many and sufficient reasons why it has not developed during these years into the force in Canadian dentistry which the hopes of its founders led them to expect.

With all its deficiencies admitted, let me point out that the Association has justified its existence. There has been patient effort on the part of such men as Willmot, Dubeau, Webster, Stevenson, Woodbury, Nolin, Cowan, Seccombe, Bradley, Magee, and to them we are indebted. Their work

has borne fruit. The D. D. C. while not complete, is largely the result of the co-operative effort of these men, and other definite results could be recorded. The principal values, however, are the more intangible but important effect of association and co-operation.

In spite, however, of all that was done, the C. D. A. finds itself to-day in the position of not having achieved the place in the life of Canadian dentistry which its founders had hoped for and which I believe from the bottom of my heart it can and should achieve. I am convinced that there is a need in Canada for the C. D. A. and that it will continue to live and prove its worth, but it will only be by the desire and interest and by the united effort of the dentists of all the Provinces of the Dominion.

The problem of the survival and growth of the C. D. A. is bound up closely with the problem of national solidarity and inter-provincial relations as apart from governmental union. It is fitting that on the year of the celebration of the sixtieth anniversary of Confederation, and in the twenty-fifth year of its existence, we should make the effort to reorganize the C. D. A. It is well that we should attempt to establish it on a basis which will appeal to and interest the whole dental profession of Canada, and which will afford opportunity for growth, as Canada grows, into a useful and indispensable power for the good of Canadian dentistry.

To-day we are faced with the tendency towards a growing provincialism in dentistry. The Prairie Provinces as a group are becoming less interested in relations with the Provinces of Ontario and Quebec. Their interests and relations are growing towards the Northwestern and Pacific Coast States. At present these provincial associations, representing some six or seven hundred dentists, are a small factor, but the time is not far distant when a considerable portion of

the dental population of Canada will be in this division.

B. C., by force of its position, is closely united with Oregon and Washington. Ontario is a self-contained unit sufficient unto itself, and Quebec very much in the same position, while the Maritimes are isolated by distance and lack of a common meeting ground from the rest of us.

This is the situation which has caused it to be considered of late whether it would be better to dissolve the C. D. A. into several smaller more local groups.

It is true that we have the D. D. C. operating in seven of the provinces and keeping contact between them. By some it is felt that two Dominion organizations are unnecessary, and that the Provincial representatives on that body might well conduct the affairs now divided between the two. It should be borne in mind that membership in the D. D. C. obligates an interchange of license, which is not acceptable to all the provinces, and that the rapidly changing and varying standards of qualification make for its instability. There are, too, problems and readjustments for the Dominion Dental Council to make within the next few years, which will be a testing time for it, and to which a good deal of thought and publicity should be given. These changing and different standards of preliminary and dental requirements in the Provinces affected will bring the whole matter to a focus. What will be the future of the Council, and if it will have a future, will depend entirely on the willingness of the Provinces to co-operate, and to my mind on a unification in the Provinces of the Dominion, of standards of entrance to the practice of dentistry.

The Province of Ontario is now passing to a two-four standard requiring the same time of study as in the Province of Quebec. Dalhousie University also is at present considering the addition of a year to its course, while the other provinces are

still accepting for practice graduates who have had shorter periods of training.

What will be the status of a D.D.C. certificate holder from a five-year province when he applies for license in a six-year province will be problematical. This matter must be given thought in the near future. It seems now the suitable time to consider the possibility of a unification of standards. It is not reasonable that only four years are necessary to make a dentist competent to serve a patient well in one province, when six years are necessary to protect that patient when he moves across the provincial boundary.

A hopeful feature of the situation is the appointment by the Board of Governors of the Dental Association of the Province of Quebec of a committee of five to consider the question of interprovincial relationships and interchange of licenses. This, I believe, is the result of an appreciation of the need of, and a desire for, closer relationship. It is an evidence of the viewing of the problems of dentistry from the wider Canadian viewpoint. That other provincial bodies should recognize this need is a desirable thing.

Whatever the future of the D.D.C. may be, there is need for provincial co-operation in a Dominion organization. This, without making it necessary for the represented Provinces to agree to interchange of licenses, will allow them to come together to discuss and act on matters which affect the whole dental profession of Canada. It will form a body which will be competent to deal with federal health matters, act for the Dominion in the matter of international relationships, and disseminate friendliness and unity between the sections of the profession in the various parts of the Dominion of Canada.

The great and pressing need of concerted effort in the cause of public dental health and preventive measures, is apparent to all of us. This

work is well organized in Ontario, and, notably in Nova Scotia and Saskatchewan, efforts are being made to meet the problem. There is a great need of interesting the federal government in the possibilities of such activity.

It is claimed that some 60,000—nearly 10 per cent.—of the population of Alberta alone is Ukrainian—the peoples of the middle States of Europe. As this number grows, in the Western Provinces, subject to our types of food and ways of living, should we not give thought to the need of dental education and dental care of these and other settlers? Is it not reasonable that when they are admitted under careful medical scrutiny, they should also be met by federal dental officers to see that they at least start out with dental good health?

These are not provincial but federal problems, and the advancement of such projects is one of the justifications of the existence of the C. D. A.

Last week, as you know, delegates met to prepare for the consideration of the Provinces which they represent, a workable plan of reorganization. A resume of what is being done will be presented to you by Dr. Frank Harwood of Saskatchewan, and your close attention and interest are asked for.

The support of the Canadian Dental Association by the *Revue Dentaire Canadienne* of Montreal, and *Oral Health* and the *Dominion Dental Journal* of Toronto should be record-

ed. The editors of these journals have thrown the weight of their influence behind the C. D. A. and have given liberally of their own time and space in their journals for the advancement of the association. This report of the year's activity would not be complete without mention of the efficient and untiring services of our General Secretary, Dr. Stanley Bagnall.

There stands in Dominion Square in the City of Montreal a large and impressive monument. It was raised to commemorate Confederation. On one of its sides stands out the name of Etienne Cartier, on the other D'Arcy McGee, and at the front that of John A. Macdonald. That monument expresses a hope that should be in us all, the hope that from our various races and sections may develop a Canadian Nationalism.

In closing I beg you to go home as missionaries to your respective provincial associations, and there preach the gospel of the C. D. A. I ask you to look on this Association not only as a necessary dental organization, but as one of the links between the different parts of the Dominion,—links which give the breath of life to the form of Confederation. Without these personal relationships, our Dominion Union is nothing but a tie which holds us in an uneasy marriage relation. Let us do our part as dentists for the true union of the Provinces and for the advancement of the dental profession of Canada.

A Study of Bacteria in Living Pulps in Relation to Grinding Teeth in Periodontia

ANDREW J. McDONAGH, D.D.S.

Read Before the Ontario Dental Association, May, 1927.

There are two problems which dentists have had before them for the last few years and which did not seem to have a great deal of relation one to the other, so far as most of us could see. However the results of the investigation related in this paper seem to link them together. The first problem was the possibility of harm as a result of grinding the enamel off the teeth during treatment for periodontoclasia. The other problem was the problem of teeth being an original focus of infection in different parts of the body.

Originally my investigations were directed towards the solving of the latter problem, but my interest soon changed and I examined only those teeth which had living pulps.

Examination of teeth having no vital organic tissue left in the pulp chamber and also the tissue which surrounded these teeth was being carried on by numbers of investigators and reports were being made to the profession. Some of these reports showed that sometimes the fluids discharging through sinuses contained no micro-organisms and at other times a variety of micro-organisms. We found much the same condition to obtain in the pulp chamber, that is, we failed to find at times micro-organisms in the debris found in the pulp chamber, and at other times we found more than one variety of micro-organisms. But as this study was not as interesting as the study of the pulp chamber which contained living pulps it was eventually discarded. I am not prepared to say that some method other than the one that I was using might not have

discovered micro-organisms in all of those cases of broken down pulps, but the ordinary strains of micro-organisms were often not there.

As this study proceeded I conceived the idea that it might be valuable in determining whether micro-organisms could find ingress into the pulp chamber by grinding the enamel off the dentine or otherwise. Therefore in the last eight or nine years during which time I have been following up this subject I have cultured or have had cultured for me over six hundred pulps of vital teeth, that is vital teeth which have been extracted. At first I did all the work in my own laboratory, sometimes using the incubator of the College and I found in the investigation that I was getting micro-organisms in 85 per cent. of all the pulps.

Interest increased as experience grew and as this new field opened itself up to me I became increasingly careful to see that no extraneous organisms got into my material for culture. Therefore I evolved a technique designed to insure no contamination of my material. The technique which we used at that time was as follows:—The teeth to be used for the purpose of culturing and which were always freshly extracted were washed off with 5 per cent. hydrochloric acid. Then a groove was cut longitudinally of the root to accommodate the blade of the cutting forceps. Then the cutting forceps were sterilized, the tooth grasped by sterilized pliers and split into a sterilized tray under the cover of another sterilized tray, the pulp or fragment of pulp removed by sterilized probes and placed in broth, this

broth was then sub-cultured after a growth was obtained. However we found that after taking these precautions that we had practically as large a percentage showing growths as when we were using blood serum and plain agar, and a less exacting technique. These results were so persistent and so different from what I expected that I looked for some outside assistance and criticism.

I applied to the Dental Research Committee of the University of Toronto to have the culturing done under their auspices and my petition was granted. My method of obtaining the material and my technique for that purpose were considered satisfactory. We sent to the pathological laboratory and had reports on about thirty cases. In sending the reports of the cases notwithstanding the fact that we had not deviated from our careful technique in obtaining the cultures, Miss Fraser, the technician of the dental research committee of the University said in regard to several cases, "This case had been contaminated by the flora of the mouth." Naturally such a comment aroused our curiosity because we felt sure no such contamination could have taken place, and we found by investigation and observance that when such a report was made it was always regarding a tooth which had a very large cavity in it. Consequently we came to the conclusion, rightly or wrongly, that in some way micro-organisms were getting into the pulp through those cavities, notwithstanding the fact that so far as we could see there was not an opening from the cavity into the pulp chamber and we always took care in splitting the tooth not to split into the cavity. That gave rise to a new thought inasmuch as it seemed to show that dentine unprotected was porous to micro-organisms.

In a paper read before the International Dental Research in New York in 1925, Dr. Charles Boedecker made

the claim that whenever a cavity became established in a tooth so that the dentine was exposed or where by natural attrition the enamel was ground off the dentine that in every such case secondary dentine was deposited in the pulp chamber in such a way that it blocked the tubulii of the dentine leading from the exposed dentine to the pulp chamber. And Dr. Boedecker showed slides and specimens which proved his case. Now we know that this secondary dentine deposited in the pulp chamber is a very homogeneous mass containing about 1 per cent. the number of tubulii ordinary dentine does. Knowing these facts and knowing that when you expose the dentine by grinding the enamel off the tooth as is done in treating for so called traumatic occlusion that the tooth has no chance of building up this protective secondary dentine. I believed that we were taking great risks of allowing micro-organisms to penetrate through the tooth into the pulp and probably into the circulation by unnecessarily and violently exposing the dentine of the tooth and that we were increasing the danger by using sulphuric acid to dissolve out the contents of the tubulii of the teeth which had been ground and which practice was regularly resorted to.

Another thought seemed to be the direct result of this reasoning and that was if you had not a break in the enamel or cementum and they were in contact with one another you could not have micro-organisms in the living pulps of teeth. Consequently to investigate this theory I have carried on for over a year a series of experiments in St. Michael's Hospital, Toronto, under the direction and the rules of the pathological laboratory of St. Michael's Hospital.

Dr. William Wagner, M.D., F.A.C.P., D.P.H., who is the pathologist of St. Michael's Hospital, was good enough to take a very keen interest in the work which I proposed to have car-

ried on in his department. He, having the interest of his patients in the Hospital at heart entered into the investigations whole heartedly and has helped us and is helping us in every possible way—personally supervising the work and making the cultures and sub-cultures. We followed the technique approved of by him in getting our culture material, that is to say, after the tooth has been extracted it must be covered with alcohol and that alcohol burnt off not only once but this must be repeated at least three times. The operator who splits the tooth to remove the pulp which is placed in sterile broth, must wear a sterile cap, sterile gloves, sterile gown and a mask and of course all the forceps and instruments must be freshly sterilized. After the specimen is placed in the broth it is immediately transferred to the incubator.

In this work in St. Michael's Hospital we have used only teeth which so far as we could see by careful examination are normally shaped teeth with not a break in the enamel or cementum. In other words the dentine is perfectly covered, and teeth of this kind are not easy to get. Many times we have found that specimens which we thought on casual observation were all right, on examination we found a break of some kind and they had to be discarded. However up to the present time we have been fortunate enough to get forty-two teeth which were satisfactory and to my great surprise and opposite to what I expected to find, 65 per cent. of these teeth proved to contain micro-organisms in living pulps. One might be led to believe because we were working in a hospital that these teeth were all extracted from patients suffering from some constitutional disease and that thereby we would get a key to the mystery, but that is not true. Several patients were outside cases who had no hospital history until we obtained it. The teeth had no cavities and they did not necessarily have ad-

vanced periodontal trouble and the enamel was not ground off either by attrition from mastication or artificially. Let me say that regarding periodontal trouble the mouths are always examined by Dr. Rutherford, who is head of the dental clinic at the Hospital as well as by myself and we have not found that it was necessary to have periodontal pockets or gingivitis, and so far as we could see there was nothing to suggest that the gingival tissues contained micro-organisms. Of course you are well aware that the experiments of Dr. Hartzell and Dr. Simmons have proven that micro-organisms are found in the gingival tissues even in fairly healthy looking specimens, consequently one cannot be too positive in this regard. On the other hand it is a fact that in our experiments we have found a number of cases where there were deep pockets and no micro-organisms in the pulps, and other cases as above said where there were no apparent pockets and pure culture micro-organisms were found in the pulp.

We have not desired or asked for a minute segregation of the micro-organisms found, however Dr. Magner has been good enough to give us some detailed information in this regard. He has found that the organisms most often recovered are streptococcus veridans; but other organisms are also found, the next in order being the staphylococcus aureus. There was one case which has great significance and which to all concerned was a matter of wonder and gratification. A patient two weeks after having had an appendiceal abscess operated on, presented himself to have some teeth extracted, one of which was a perfect specimen for our work. Upon culturing the pulp of that tooth Dr. Magner found the bacillus communis colii. This evidently demonstrates that that bacillus was either still in the blood two weeks after the operation, or else it was protected and

preserved in the pulp of that tooth. It certainly reached there through the circulation. Of course we would be justified in making the same claim about all the other micro-organisms found in those pulps but this being an unusual organism to find in the blood immediately draws one's attention to the source of the micro-organisms in the teeth and we are certainly justified in conjecturing that selective organisms found in devitalized teeth and in areas at the apices of teeth have their origin a long distance from the teeth. In other words instead of the teeth being the original focus of infection for, say kidney, heart and other lesions, the organisms have travelled from the kidney and the heart and lodged in and around the devitalized teeth. Now this does not mean as I see it, that those devitalized teeth harboring these selective organisms are not a menace to the health and life of the patient. Because so long as they are in that condition they can re-infect the infected tissues but it does mean that there are hundreds of cases of devitalized teeth having areas and containing micro-organisms which are doing the individual no harm, but that if these micro-organisms are replaced by organisms obtained through the circulation which are pathogenic to the patient, the teeth are then a source of danger. It also shows us why we often find that extracting teeth has only a temporary beneficial effect on the patient. That is to say as the teeth are not the original source of infection it is necessary not only to extract the teeth but the original source must be found and eliminated.

Just at this point let me draw your attention to another truth which these investigations have shown us and that is that you can have a devitalized tooth doing no harm to the individual and you can have a vital tooth a focus of infection; and so called neuralgia pains from teeth with large fillings that have been in for

some time may be and probably are the result of micro-organic irritation in the pulp. It also demonstrates, if demonstration were necessary that if you fill or nearly fill the root of a freshly devitalized tooth with copper amalgam or any similar substance which substance will not allow micro-organisms to grow within two mm of it, if you fill the roots I say with such a material, you cannot have that tooth infected from the circulation. Does this not go a long way to solve the problem of focal infection from devitalized teeth?

Because we have been trying to get teeth for our work as nearly perfect as we could find, the number of these teeth reported on is comparatively small, and one is apt to lose sight of the fact that also embodied in this paper we have a report of hundreds of other teeth many of which have but small cavities, some scarcely more than a strain. Consequently if we take all of these into consideration we have a large amount of data to depend upon because I do not believe that with secondary dentine formed in the pulp chamber any small cavity increases very greatly the likelihood of micro-organisms penetrating the dentine, and notwithstanding the fact that recklessly exposing the dentine by grinding or otherwise is to be very much deplored. Nevertheless in the hands of careful experienced operators, grinding the enamel off the teeth to correct occlusion is not fraught with any danger to the patient.

We have in this work discovered what seems to be an important fact, if it is borne out by further investigation, namely, that teeth which have through one cause or another had secondary dentine deposited to such an extent that the pulp was very much reduced in size did not contain micro-organisms, and that teeth the apices of which were so highly calcified that they were nearly transparent also did not contain micro-organisms. Usually these conditions were connected with

advanced periodontoclasia or rather the result of alveoloclasia. That is to say the bony investing material of the teeth had partly disappeared, so that the teeth were loose but vital, in fact in some cases the periodontal tissue had been stripped from the root for more than half its length. On the other hand large functioning pulps were prone to contain micro-organisms. Consequently you can see that an investigator can very easily influence the percentage of teeth containing micro-organisms by the kind of specimens he chooses. Peculiar as it may seem, in a number of cases in the same mouth and under the same condition as far as we could see, we could recover micro-organisms from one tooth and not from another. We have met several of these instances. I have here a report of one such case of a girl nineteen years old. There are some features about it that might be of some interest to you and I will make a full report of it on that account and also read Dr.

Rutherford's remarks. I am also showing here an X-ray taken by the Hospital showing the very unhealthy condition of the mouth of this patient from whom we took two teeth, the bicuspid and cuspid in the lower jaw, and had a report that they were sterile.

In doing this work I have had very generous assistance from a number of sources. I want to acknowledge my gratitude to Dr. Marjorie Milne, Dr. Harry Thomson and Miss Fraser of the Dental Research Committee, also Dr. Rutherford, Dr. Gordon Frawley and Dr. Montgomery of St. Michael's Hospital Dental Clinic and also to Dr. William Magner, Pathologist of St. Michael's Hospital and also to the Hospital itself which has afforded us every facility for research. I am also glad to say that the work is still being carried on in this institution and we have assurance of further help from the X-ray department under Dr. Shannon and any other necessary assistance.

The dental engine was just coming into vogue in 1874 when the American Dental Association met in Detroit.

Under three flags
in ancient days helps to make Detroit
both cosmopolitan and hospitable in
modern days.

Did you know the profession was experimenting with cast aluminum plates when the American Dental Association met in Detroit in 1874?

We are not so fast, Dr. E. Osmond, Cincinnati, Ohio, addressing the American Dental Association at its

meeting in Detroit in 1874, said, "I knew a party who graduated after a session of three weeks, who never pulled a tooth in his life until ten months before, who runs a laughing gas establishment and who, in four months, sold twenty-one penny weight of gold which he had taken from teeth he had extracted." Can you beat it?

Detroit in October offers you everything from Ford to Packard.

There is no fool like an old fool. Don't be foolish! Come to Detroit in October!

DENTAL SOCIETIES

Dental Nurses' Convention

Reported by Miss Gertrude Whitehead, President.

The fifth annual meeting of the Dental Nurses' Convention opened at 10.30 Tuesday, May 17th. Miss F. G. Whitehead, the President, introduced the speakers for the first period, Dr. C. N. Johnson of Chicago, and Miss Juliette A. Southard, the President of the American Dental Assistants' Association.

Dr. C. N. Johnson first expressed his very keen appreciation of the invitation to come and address the girls of this organization. It was a very pleasant surprise to find present Miss Southard, President of the American Dental Assistants' Association, who had been responsible for the wonderful progress of the Dental Assistant in the United States. He had just been telling Miss Southard he thought he wrote the first paper on the Dental Assistant, but Miss Southard said that there had been one written previously she thought. Dr. Johnson read a paper in Chicago about 1900 or 1901 on the Dental Assistant, which was published in the Dental Review. Until that time he had never seen anything in print.

The Nurses of Chicago made Dr. Johnson their Counselor and he had the pleasure of attending the banquet of their organization a short time ago, and was very proud of the work they are doing in Chicago, and is very proud of the work the Dental Assistant is doing all over the country. He said the work had been very discouraging at times, they had met with a great deal of opposition, but gradually those opposed were beginning to see light and appreciate the service of the Dental Assistant.

Dr. Johnson read an editorial from

the American Dental Journal of June, 1925, in which he paid the very highest tribute to the Dental Assistant and the wonderful work she is doing to-day.

Dr. Johnson pledged his earnest support at any time to the Dental Nurses' Association, urged them to come to him as their father, counselor or friend and he would do all he could for them to raise their status in the eyes of their profession to where they rightfully belong.

Miss Southard, President of the American Dental Assistants' Association was the next speaker. She wished to personally acknowledge the tribute Dr. Johnson had paid her, and that what she had been able to accomplish for the Dental Assistants in the States was due to the inspiration, support and friendship of Dr. Johnson and other men like him, who are trying to do something that may leave the profession of Dentistry better and bigger for them having been in it.

Miss Southard told the girls how some seventeen years ago she had started as a Dental Assistant herself and she was not there long before she realized from the viewpoint of the patient that there should be an intelligent woman in every dental office, and she started in a small way writing for some of the Dental publications, and then later lecturing to a great many of the Dental Societies in the eastern section of the United States. She eventually organized the New York Association for Dental Assistants all alone. They met with a good deal of opposition on the part of the Dental profession, but now they have won the respect of every

reputable Dental practitioner in that part of the country.

Years ago a boy could go into the dental office to do the work of the dental assistant but at the same time he was learning the profession, and in later years when the Dental schools were established it was no longer necessary for the boy to go into the dental office to learn his profession, and consequently the dentist found he had to have some one, and a woman was employed. They did not, however, in those days have confidence in the ability of womanhood, and they were given menial parts in the office, they were not given the recognition they should have had. In a great many offices they were just maids or servants about the office. As the profession of Dentistry advanced they found they must have more intelligent service so they called in more intelligent women and gradually developed the Dental Assistant as she has been known for the past ten years.

Miss Southard mentioned the National Dental Assistants' Association Convention in Detroit to be held in October of this year. She said a Convention of this kind was very inspiring to the Dental Assistants. "Rome was not built in a day" so if the Dental profession do not recognize the Dental assistant, make your service valuable and you will eventually be rewarded for your efforts. The Dental profession must be educated along that line as well; they must realize if a girl who has the capacity cannot find remuneration or be appreciated she will find it elsewhere, in the stock brokers' office, the banks or with the big business man.

One of the great troubles we have to overcome is the feeling on the part of the profession that the girls getting together forget their loyalty to their office and employer. A great deal of havoc is sometimes caused by a girl thoughtlessly telling something which is really insignificant, but gets from one to the other and finally back to

where it originated. It may be something very trifling but cause a great deal of trouble, so there must be a deep sense of loyalty and you must realize the affairs in a dental office where you are associated must not, under any circumstances be repeated, at home, to your associates or to another dental office. In the States it has been suggested that the girls were banded together in labor unions, for the purpose of raising the salaries in the dental offices, but this is absurd. Miss Southard has tried in every way possible to make the professional men realize that they have had the opportunity of being educated through established Colleges and Schools, and they should be big and proud enough to grant the same desire to another group of individuals who are striving for the same thing. The fundamental platform is the establishment in the Dental Colleges in the States of courses for the training of Dental Assistants. The Deans of some of the Colleges are very interested and some day we hope to have the opportunity you have here.

Miss Southard spoke of the Dental Assistants of the past who have served some from 10 to 20 years, these girls cannot be replaced by a girl with one or two years' training in the school, and these girls must not be forgotten.

The work of the Dental Assistants' Association in the States began in 1917. The first society was organized in Omaha, Nebraska, in 1917. Since 1921 there have been 35 or 40 new organizations and growing every day. In small localities they hold two meetings a month, one for business and one social, in the larger cities they hold one meeting a month. They usually divide the speakers, having a speaker in relation to their duties in the profession of Dentistry and a speaker on some topic such as art, welfare, travel, etc., anything so long as it is educational value. They have classes for the members in groups and

the work covered is chair assistance, bookkeeping, telephone courtesy, laboratory procedure, X-ray, etc.

Miss Southard closed her address with the following:

Let me but do my work from day to day

In field or forest, at the desk or loom

In rearing market place or tranquil room.

Let me but find it in my heart to say,
When vagrant wishes beckon me astray

This is my work; my blessing not my doom.

Then shall I see it not too great or small,

To suit my spirit or to prove my powers;

Then shall I cheerful greet the laboring hours,

And cheerful turn, where the long shadows fall

At eventide, to play and love and rest,
because

I know for me my work is best.

At 12.15 the National Refining Co. gave a Complimentary Luncheon in the Oak room. Mrs. Beth Arnott Ellis, Mr. Heather with Miss Collins and Miss ——— as accompanists rendered solos which were greatly appreciated.

The President on behalf of the Dental Nurses, thanked Mr. McTavish and National Refining Co. for the luncheon.

Mr. McTavish assured the nurses it had been a great pleasure to tender the luncheon, and introduced Rev. Mr. Young, of St. Paul's United Church, Avenue Road, whose words to the Dental Nurses were very interesting. He appreciates the service of the Dental Assistant and mentioned how, on a recent and prolonged as possible visit to his dentist, he had missed the Dental Assistant who happened to be absent from the office. He spoke of the different worlds we dwell in, that people live in worlds as far apart as

the poles. What makes the difference in the world we live in, is our response to the things which come into our lives, which fail to thrill us. He spoke of the voice of human need, and said if a person is going to do anything worth while he has got to live in a world that is not sound proof to the voice of human need. Then there is the voice of the to-morrow, let every one of us think less about the immediate tasks, let us get a vision of the to-morrow before our eyes. Mr. Young said he had often stopped and thought, well what have I done to make this a better world for the to-morrow.

At 3.30 the second session of the programme was taken by Dr. John Jacob Posner of St. Luke's Hospital, New York City.

Dr. Posner told the Nurses that through the untiring efforts of Miss Southard the Dental Assistant had become so efficient that the Dentists have been able to carry on their work in a much finer manner.

Dr. Posner impressed upon the Nurses the necessity of giving real service to the Dentist with whom they are associated. When you are in the office working for a man, give him service, even though some times not appreciated. Dr. Posner spoke of the personal appearance of the Dental Nurse in meeting patients, he told them their value depends on what they can do, what they produce. First interest yourself in your work, and if you are only a door opener, or appointment maker, and you step out to-night some one can take your place in the morning. Improve yourself in the office, interest yourself and learn a lot about your work. Keep the bottles clean and in order, the instruments cleaned and sharpened. Dr. Posner suggested the use of wood applicators, one end neatly wound with cotton, to be kept in a covered jar for the use of the Dentist.

The Doctor gave an interesting talk on Local Anaesthesia. He endorsed

the using of local anaesthesia for drilling cavities properly before taking the impressions for inlays, etc., thus enabling the Dentist to work calmly and do his work properly. Get to know your patients, have in mind what the Dentist will be doing on their next visit, and when you see a chance that the Dentist is possibly going to need the syringe, have it ready and present it to him, if he does not happen to need it all right, if he does he will appreciate your effort. Most Dentists use anaesthesia E tablet, the letter indicating how much of another drug is combined; you cannot inject novocain alone. Superenum ties up the blood vessels, while the partner novocain is tying up the nerves, and

between them they affect the nerve so there is no pain. Too much superenum ties up the blood too long and causes pain. T. is the proper tablet to use.

Dr. Posner urged the Dental Nurses to use the glass syringe, but to take boiling water into the barrel only through the needle. He also spoke of the superiority of the platinum needle, which becomes sterile in a flame and does not have to be boiled for hours.

In closing Dr. Posner told the Dental Nurses to keep trying to improve themselves and make themselves so efficient they would be invaluable to the dental profession.

Golden Jubilee of Eastern Ontario Dental Association

The fiftieth annual meeting of the Eastern Ontario Dental Association was held at the Algonquin Hotel, Stanley Island, near Cornwall on Wednesday, Thursday and Friday, June 22nd, 23rd and 24th, 1927.

The program committee had done some real work in anticipation of this eventful meeting and were delighted with the excellent attendance of the members and their wives who turned out to celebrate the occasion of the Golden Jubilee.

Dr. R. E. Sparks of Kingston, a veteran in the profession and the only living charter member of the association, was present, and reviewed many of the early experiences of the organization. Dr. Sparks, in spite of his long years in the profession, is hale and hearty and we wish for him many more years of usefulness in his chosen profession.

Essays and clinics were well attended and many interesting points were brought out in the discussion.

The Wednesday evening program was given over to business session and the report of our District Representative, Dr. S. S. Davidson, with some supplementary remarks by Dr. W. E. Willmott.

On Thursday morning, Dr. Lorne MacLachlan of Ottawa gave his clinic on "All compound technique for Mandibular impressions." In this clinic Dr. MacLachlan demonstrated on patient and carried through to the boxing-up, the technique of Clapp and Tench as adopted by Dr. Schlosser of North Western University.

Then came Dr. Nolin of University of Montreal, in which he presented his survey on Dental Hygiene.

On Thursday afternoon we were favored with a paper by Dr. A. E. Webster of Toronto, on "The factors

which help to determine how long a human denture will last". Dr. Webster has always displayed a keen interest in the affairs of the E. & D. A., and his paper showed a thorough knowledge of the subject.

Dr. Krueger's paper, "Dentistry—a Health Service", was a clear exposition on the common sense attitude in Root Canal Therapy.

Dr. D. C. W. Coupland, Ottawa, presented a paper with slides on "The place of X-ray in Diagnosis", and gave us some new thoughts on granulomas, impactions and cysts.

On Thursday night at 6.30 we were entertained at the Golden Jubilee Banquet at which Canon Allan Shatford of Montreal, was the chief speaker.

Canon Shatford is always a most pleasing and eloquent speaker, but on this occasion he surpassed in eloquence anything that we have heard in his previous addresses.

He compared the progress of the Eastern Ontario Dental Association to that of the Dominion of Canada and

reviewed the history of both bodies and their experiences all down through the fifty years.

The evening's entertainment of dancing and solos by Miss Grace Ely and Dr. Archie Grace was much appreciated by all who were privileged to be present on this historic occasion.

As is usual at conventions in Stanley Island, we had our usual round of golf and everyone was enthusiastic in his praise of the excellent program provided.

The 1928 meeting will be held in Ottawa with the following officers elected:—

President—Dr. S. G. McCaughey, Ottawa.

Vice President—Dr. G. M. Gorrell, Morrisburg.

Secretary Treasurer—Dr. D. C. M. Coupland, Ottawa.

Program Committee—Dr. W. C. Macartney, Dr. A. W. Grace, Dr. H. W. Weagant, Dr. R. P. Miller and Dr. M. J. Mulvihill, W.C.M.

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American Dental Association, American Dental Hygienists Association, and American Dental Assistants Asso- ciation, Detroit, Michigan, October 18-28, 1927

The following arrangements for reduced fares to members of the Dental societies of Canada attending the above meeting have been authorized: From all stations in Canadian Passenger Association, Eastern line territory, viz: points in Canada, east of and including Armstrong and Fort William, Ont. Good going October 15, 17, 18, 19, 22, 24, and 25, 1927, inclusive. Passengers must reach original starting point not later than midnight of November 3, 1927.

From points in the province of British Columbia, dates of sale: October 11, 13, 14, 15, 18, 20 and 21; final return limit thirty days from date of sale.

From points in the provinces of Alberta, Saskatchewan, Manitoba and Ontario, (West of Port Arthur and Armstrong) October 15, 17, 18, 19, 22, 24 and 25, final return limit November 3, 1927. Passengers must reach original starting point not later than midnight of final return limit.

Round trip tickets requiring validation by terminal lines agents at Detroit, Mich., at one and one-half fare, to be sold by your local ticket agent upon surrender of identification certificate. Apply to Dr. D. C. Bacon, Transportation Committee 31 N. State St., Chicago, Ill., for certificates.

Certificates will be ready for mailing approximately thirty days prior to the date of the meeting.

NEWLY ELECTED ALBERTA DENTAL BOARD

Dr. H. L. Coursier, Pres.
Dr. A. B. Mason, Sec'y.
Dr. M. L. Moore, V. Pres.
Dr. V. A. H. Macauley, Director.
Dr. J. W. Clay, Director.
Dr. L. T. Allen, Director.
Dr. Leslie McIntyre, Director.

OFFICERS OF THE DENTAL STUDENTS' CLUB, EDMONTON, ALTA.

Dave C. Haworth was elected president; C. M. Lowry, vice-president; Sperry Fraser, secretary-treasurer; George Decker, second year rep., and Roy Thorpe, Gateway and Year Book rep. A freshman representative will be chosen in the fall.

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holds largely responsible for tooth decay and pyorrhea.

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Editorial

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Vol. XXXIX

TORONTO, AUGUST, 1927

No. 8

Of the Making Dental Programs There is No End

“Have you any dentists down east whom you think might come west either the last week of May or the first week of June, 1929, and give us something of a really good common place type of work that the average dentist can make use of when he goes home from the Convention?” This is a quotation from a private letter to the editor. The writer goes on to say that too often such essayists are specialists or “cranks.”

These quotations mean a great deal more than they say and dear knows they say enough of wholesome truth. They express the view that the general practitioner is getting tired of the convention speaker because he gets little out of him. With the whole dental world open to the convention committee to choose from the problem is not even then solved. There seems to be little or no method or principles followed in making out a program. Generally it is an all star cast leading nowhere except into the slough of despair. There is no study of the dental condition of those likely to attend.

Of the two day meeting perhaps two hours or more are devoted to a single subject by the same speaker. All good in itself but without any regard to how many need the instruction or the importance of other subjects on the program. All life is made up of choices; so are



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the subjects of a program as well as the speakers. What is a great success in one community may be a total failure in another.

We know of no study having been given to the preparation of a dental convention program. The habit of asking the members what they want is fruitless because they have not the data at hand upon which to come to a conclusion.

Most conventions are organized and run upon tradition. What was attractive last year surely ought to be good again. Dental conventions are like the old-fashioned dental faculties used to be. Every faculty had to have a show man, a wind splitter, a barn stormer, if you please. But when a whole faculty or program is made up of such the members go home wondering what they could do as well or better than they could before. A dental convention is a very complex thing. Its success or failure is made up of many factors. We submit a few facts for consideration in making a program.

1. How many dentists will be present?
2. Where is the meeting to be held?
3. What kind of accommodation is there for sessions, clinics, exhibits, committees, meals, sleeping and recreation?
4. What is the experience of the organization in conducting a meeting?

5. Will the various committee men give the time to carry out the instructions of the executive?

So much for the physical part of the program.

6. Make a study of the dentists who will attend

(a) Have they been in the habit of attending conventions and will they follow or take direction so as to avoid jams?

(b) Divide the total number of dentists into groups which will account for their attendance. Thus 20% prefer the exhibits, buy some goods and visit with their friends. 50% prefer to see the clinics. 5% wish to hear the scientific papers. 5% wish to keep in touch with the politics of dentistry and the business of the association. 10% wish to have a little outing at that time of year, meet the fellows, attend the races, play a little golf and go to the shows. 10% wish to hear papers which illustrate how to do things. These percentages will vary in different communities, depending upon many factors.

(c) What are the age and experience of those in attendance?

(d) What kinds of programs have been previously presented?

7. The subject matter of the program. It should be adapted to the requirements of the members. Above all it must create an interest. It must look attractive on paper. It must be talked about. Certain subjects though not outwardly attractive must be presented to the limit of endurance of the members. It is upon the fundamental sciences that dentistry has a place among the professions.

(a) No dental program is worthy of presentation which does not contain at least one fundamental subject applied.

(b) Some subject should be more or less exhaustively presented.

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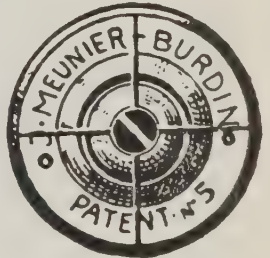
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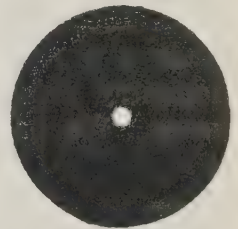
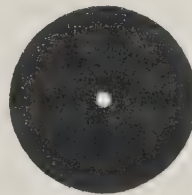
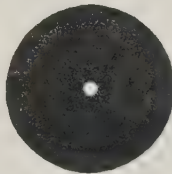
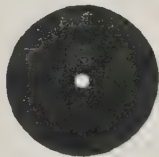
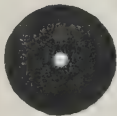
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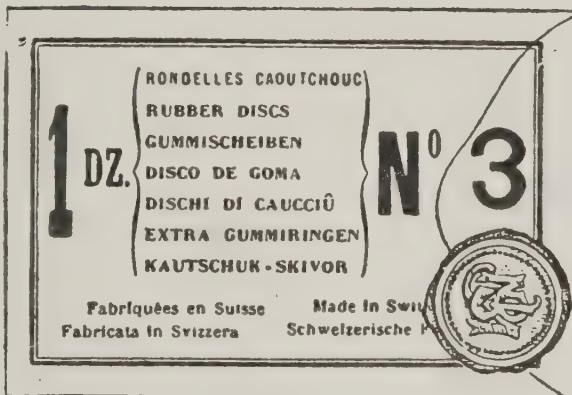
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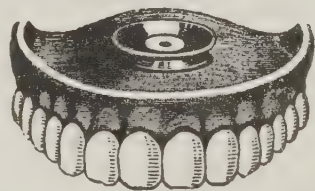
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(c) The new, the spectacular, the erratic, the original, must all have a place on a program.

(d) A full session should be given over to technical procedures.

(e) History, jurisprudence, ethics, dental education, dental organizations and dental relationships to the State, the public and other professions should have a place.

This is an attempt to show how a dental program can be built and adapted to its requirements without following that threadbare method of making a program of specialists, cranks and spellbinders who go about the country presenting subjects which have no relation to the other subjects on the program and little value to those who are supposed to listen.

To quote again from the letter we started with. "I don't hesitate to say of 200 men who attend conventions that many of them will follow the practices or instructions of specialists who take up so large a part of their time."

Dr. Alex. Gerneroy, Edmonton, has made a study of diet in relation to dentistry during the past several years. We are pleased to publish a

recent paper of his in this issue. Dentists, like all good citizens, must give attention to what are public questions.

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Dominion Dental Journal

Vol. XXXIX

TORONTO, SEPTEMBER, 1927

No. 9



J. A. BOTHWELL, D.D.S.
President of the Ontario Dental Association, 1927.

ORIGINAL COMMUNICATIONS

President's Address

BY J. A. BOTHWELL, D.D.S.

Gentlemen of the Ontario Dental Association,—

Your society, this year, has reached a time in its existence when it should look steadfastly into, and think seriously about, the future. This should be easy because we have as an inspiration, the success attained by our efforts in the past and the standing we now have in the present. A glance backward through the sixty years of our organized life will show us the strides we have made.

We were first organized away back in 1867—in a very humble way with many handicaps, only a few members, and a very weak financial backing. We have grown, especially in the last ten years, to our present enviable position—that of one of the strongest provincial organizations in Canada. The work our Association has accomplished in increasing its membership, in educating the public, and in placing itself in a sound financial position is most wonderful indeed. Its present status is sound beyond doubt. Our annual meetings are more than well attended; our programs are the best available; our finances are such that we have some bonds, and a good cash surplus in the bank.

For our future we should be most concerned. But as I said before, inspired by the efforts and results of our predecessors, it is necessary only to put our shoulder to the wheel and push on for greater things. With this perseverance and the co-operation of the Government, we are bound to succeed. Recently the Canadian Dental Hygiene Council had a con-

tribution of \$5,000 from the Dominion Government and \$2,500 from the Red Cross Society to be spent for the purpose of Dental education. The Red Cross Society assisted us in making our Dental Health Day the success it proved to be. In the coming Red Cross campaign we should aim to be of valuable assistance to them, remembering the thought in the old but true motto: "He who seeks to serve another, best serves himself".

The report of the Oral Hygiene Committee will show that the Ontario Government is planning big things which will make for better Dentistry. In the Provincial Secretary's Department, under the leadership of our capable Dr. Conboy, efficient Dental service will be established in Ontario hospitals and Mental institutions. Where the Hospital authorities will meet the requirements of the Department, a Dental interne will be appointed. Each interne will remain one year. His work will consist chiefly of research and at its termination he shall be required to submit a thesis embodying the results of his studies. If this, together with one or two other requirements, be passed upon by the Faculty of Dentistry, the Dentist is now eligible for the degree of Bachelor of Science in Dentistry. A Master degree is also available.

The Department of Health is taking the lead in the Dental Health education of the people, and all dentists should co-operate. The Government has sent a dentist to Northern Ontario to do free work for the people who

cannot pay. This will not interfere with, but rather aid, the practice of the resident dentist.

One active step being taken by the Ontario Dental Association is the donation of a \$250.00 scholarship to any dentist who will take an internship in an Ontario hospital with a well organized Dental Department as a major service. Another is our assistance in the education of the adopted son of one of our own Ontario dentist missionaries. One of my

confreres will tell you more about this.

Now that I have given you a word picture of our future possibilities, it behooves us as dentists, to work and live for dentistry; to do research and all kinds of educational work for the welfare of the public and our own. Our duties will not have ended until we have reached the pinnacle of Perfection. Now let us realize our responsibilities and go forward to make dentistry bigger and better than ever.

A Broader Vision of Bridgework

BY W. D. N. MOORE, L.D.S., D.D.S., CHICAGO, ILLINOIS.

Read before the Ontario Dental Society, May 18, 1927.

It is doubtful if many dentists comprehend how old this branch of dentistry is. To most of us it is considered of rather recent origin—probably a practice of little over half a century. Ancient historical records confirm the belief that dental bridge-work was used to replace missing teeth previous to the Christian era. The writings of the Romans bear testimony that this classical race had a pride in their personal appearance and replaced lost teeth by the method of bridgework. It is believed that these people gained their knowledge of this work from the Greeks; the latter acquiring it from the Egyptians. To substantiate this belief specimens of dental work of this character have been found in the jaws of mummies buried about 500 B.C. The teeth used to substitute missing teeth were made of different materials, such as stone, ivory, bone, natural teeth and even wood. Whatever the material chosen from which they were made, the artificial teeth were crudely assembled and attached by gold or silver bands or wire to

the natural teeth, thus introducing or pioneering the way to present day bridgework. The Etruscans showed evidence of familiarity with a broader knowledge of the requirements of bridgework, for history relates that both fixed and removable bridgework were used as early as 600 B. C. Mediaeval history has little, if anything, relative to this work and it might appear that dentistry left no historical record in this age. Early in the eighteenth century dental literature records the use of "pivot teeth" attached to roots but the revival of the ancient practice was not noted until a century later—in the early part of the nineteenth century—and this time credit is given to the French. The work throughout all these ages is believed to be the work of craftsmen. It was crudely constructed and bore no evidence that it was the product of a scientific mind. The people's idea of the esthetic must, however, be observed. They apparently made little demand for anything practical or of a stable character. It was not until after the middle of

the nineteenth century, and especially the latter part of it that the beginning of modern bridgework was definitely recognized. Since that time, and particularly with the advancement of dental science, modern bridgework has developed rapidly and has become an important branch of dentistry.

Previous to the present century dental bridgework was, to a large extent, a mechanical art. Many of the scientific phases, so much regarded today for the welfare of the teeth themselves, as well as their supporting tissues, received little, if any, consideration. Craftsmanship played the major role. As time went on the profession became more enlightened in such subjects as histology, physiology and pathology, which had its marked effects upon the practice of bridgework. Advancement in the scientific field of dentistry rapidly contradicted methods that a short time before had been extensively used and were considered imperative. It was not unlike the advent of many new undertakings in their experimental stage. A lack of knowledge of any subject that has to do with the health of the human race is of serious importance. Added to this, especially in the early days of dental bridgework, this rather new practice of supplying missing teeth "without plates" opened a field for the commercial and unscrupulous mind which worked a disaster that is too often apparent in the beginning of new methods. Abuses arose that had their train of havoc, and it was not until scientific knowledge stamped itself forcibly upon the profession that many of the evils connected with this practice were eliminated.

Supplying lost teeth by means of bridgework met with such favor that the technical aspect of it received more consideration and attention in its development than other phases of the subject which were thought of minor importance. There was little realization of the significance of vital

pulps in natural teeth, gingival areas free from irritation and other deleterious influences on the structures involved in the use of a bridge. Technical principles dominated all others. Devitalization of teeth to support bridges was then advocated as good practice. Bands on these same teeth for the purpose of stability in attachments were considered necessary and no serious injury to the surrounding tissues of natural teeth was thought to follow their use. Even the placing of porcelain and metal roots well into the sockets of newly extracted teeth appealed to many enthusiasts and was employed in this manner in practice. It was plainly evident that the structural features of bridgework superseded the scientific requirements of the adjacent structures, and it was not until a broader knowledge of this subject was acquired that many of these methods were modified.

A survey and a study of the technical side of bridgework from its earliest days to the beginning of the present century will forcibly impress one with the rapid progress and the skillful application made in this work. Scientific enlightenment was slowly and steadily furthering its development until it was recognized, where indicated and properly constructed, as an indispensable method for the replacement of missing teeth. In spite of all the advancement this work had made in modern times, it was not until the introduction of the casting process that it met with the greatest development. This process introduced a new era in prosthetic dentistry. Its possibilities were broadened in a manner never before thought practical, and, as the curtain raised on the dental horizon it opened a vision of length and breadth in new methods in dental operations that before were clouded in obscurity. In the technical field of bridgework the casting process completely revolutionized former methods. Its possibilities were almost without limitation in this

branch of dentistry. Not that this process changed the basic principles of bridgework, but it solved problems that had previously been obstacles to progress. It was the key that opened the portals to greater achievements in dental bridgework and since its adoption a broader range of service to the patient has more generally resulted. The process of casting offers as such outstanding facilities for accuracy of adaptation, wider opportunities for obtaining anatomical form and contour, the use of metals most suitable for their requirements, for simplicity and definiteness of technique, together with a broader scope of possibilities in each individual case, that it cannot be denied to be the greatest benefactor in the practice of bridgework that has yet been experienced. It was particularly fortunate that this method was introduced a short time previous to the denunciation of pulpless teeth, for the casting process made it possible to construct attachments to vital teeth, as well as minimize mutilation of tooth substance that would have jeopardized the life of vital pulps in the supporting teeth for dental bridges. It guarded the blow to bridge work that, without its advantages, would have proven serious to its practice.

With all the advantages gained for bridgework by the casting process, together with that acquired in early years, this practice seemed to enjoy a place in dentistry secure from criticism, and its satisfactory service to patients, requiring it was fully assured, provided indications and construction were correct. All seemed well until the dawning of the day that sounded the alarm of focal infection in and about the roots of natural teeth. This was not only confined to pulpless teeth but to infection within the gingival area and all other centres that in any way afforded portals of entry for infection to the supporting tissues. It is doubtful if anything had ever, previous to the

discovery of focal infection, disorganized the methods of practice in dentistry in the manner this subject has. Some of the changes were of a progressive sort but the good done seemed at times to be discounted by the mistakes that were committed. Where good judgment was exercised and more regard was given to the importance of mouth hygiene, effort was stimulated to higher achievements and a broader view taken of bridge practice.

The teaching of devitalizing pulps of teeth previous to making an attachment for a dental bridge is well within the memory of almost all dentists. Where a gold crown was to serve in this capacity devitalization was considered imperative for the correct preparation for its reception. This is distinct evidence of a lack of knowledge at that time of the importance of vital pulps. This procedure today with few exceptions would be severely criticized, and correctly so. The casting process has afforded us means for the accomplishment of the same purpose without injury to the pulpal tissue and it is now rarely necessary to cause the loss of pulps of teeth to be used for this purpose. But many of the teeth to be employed for the supporting structure of a bridge are already pulpless. Are we to use these or extract them? This has been a much debated question, and one upon which the profession has been divided. Experience over a number of years in practice is best able to answer. Where the roots of these teeth have been reasonably well treated and filled, they have, and will, serve the patient long and comfortably in this capacity. Many years of satisfactory service to its host have provided the proof of the truth of this statement. The boast is made by some prominent in the practice of dentistry that they have not used a pulpless tooth for even the insertion of a simple inlay filling. Here misfortune lies with the patient rather

than commendation with the operator. In spite of the fact that well filled roots render admirable service in bridgework, unnecessary devitalization of pulps in the supporting teeth for a bridge is not to be recommended. Their conservation at all times should be desired.

Equally important is the consideration for non-irritation of gingival tissues. This does not mean that supporting teeth can never be successfully banded, for experience again proves the contrary. It must be done according to hygienic requirements. The most damaging results from the terror of focal infection were the extensive extraction of useful teeth, thus making replacement more comprehensive and difficult. If a full realization of this had been possessed by the advocates of focal infection, and if these lost dental organs had been possessed by them, less ravages to human mouths would have taken place. But unfortunately restoration of these cases fell to the lot of others. To meet all these conditions, and at the same time obey the new order of things, led to many changes in methods of bridge construction. The condemnation Hunter pronounced upon the gold crown shook the faith of both dentists and laymen in its use. While his criticism was not a just one, it was readily accepted by many of the medical profession and their patients were warned against its use. His censure had to be disproven or other methods adopted. Satisfactory use of the gold crown, where properly constructed, has disqualified his statement and the casting process has limited the use of banded crowns. It was an attack upon a principle, where technique may have been entirely at fault. Nevertheless, coming from the source of authority it did, it was misapplied and was responsible for an injustice to a useful procedure in the practice of bridgework that was injurious in its results. Where indicated and properly constructed there is no form of attachment superior

to that afforded by the gold crown.

Advanced scientific knowledge had begun to make itself felt on the practice of bridgework. It was quite a new thought, for previous to this time the technical part of this work was the principal consideration. In fact, it startled the minds of practitioners and many different views were taken of the practicability of the fixed dental bridge; while in truth the influences that were being exerted were but a refining process. It was being purged of much of its faulty application and construction, while its principle remained unharmed. But, as is true with the history of similar experiences, the tried and proven was by many irrational minds wholly and unconditionally condemned as a practical means of supplying missing teeth. This was specifically directed at fixed bridgework then extensively used. It was a time rife in change and unrest in dental practice and bridgework was an attractive field for adventure. Fixed bridgework was thought to have outlived its usefulness and removable bridgework was heralded by some as the ideal method to pursue. Balance and poise in matters pertaining to dental affairs were lost, for a time, and many new ideas were promulgated with positive assurance of success whether or not they had been sufficiently tried. The same was true of the revival of old and discarded practices in modified forms. Much of this irrationalism found its growth in the younger and inexperienced minds, and, solely because it was new, had a forcible psychological effect upon the patient. This was distinctly true of, and applicable to, the removable bridge. If fixed bridgework were to receive its final condemnation, and its use to be discontinued, never was there a more opportune time than this for its enemies to pronounce sentence. This was probably the severest test that ever was or ever will be applied to the practice of fixed bridgework. For a time its survival

was in the balance but, as is usual, time was the deciding factor, for it permitted irrationalism to go beyond the pale of reason in claims for the universal adoption of removable bridgework in practice its advocates defeating the arrival of their own objective. Inexperience and a lack of farsightedness defeated their efforts. Men of long outstanding authority upon this subject voiced the dangers of such irrationalism and their warnings acted as the ballast that righted the ship in distress. If not recognized fully now, in time to come the name of Hart J. Goslee will stand out prominently for the good done in this particular work at this time. The influences of his writings and teachings have always been for rational methods in dentistry and a debt of gratitude is due him for the stability he gave the practice of fixed bridgework during these threatening times.

The loss of a single natural tooth, normally erupted in its place in either arch, is a distinct loss to any individual and there is no repair that fully compensates the misfortune, and this misfortune is in proportion to the number of teeth missing. Repair should be begun soon after the extraction of teeth, particularly if it should be any of the first permanent molars or permanent cuspids of young patients. In fact, it is imperative if correct occlusion, dimension of arches, and facial expression are to be maintained. In cases where the replacement of the missing teeth is not too great a strain for the supporting teeth the restoration can, usually, be best accomplished by means of a fixed bridge, properly constructed. That the ordinary sized fixed bridge inhibits tooth movement in function is not well founded. Even in cases of larger fixed bridges than wisdom would indicate, it would be impossible to obtain complete fixation of the supporting teeth on account of the character of the structure in which these teeth are placed. It is to be remem-

bered that extensive fixed bridgework is not here recommended. Nor is it true that a supporting tooth ordinarily used in fixed bridgework is not able to endure the additional stress required of the bridge. According to recognized histologists the tissues, in particular the peridental membrane, will favorably react to increased stress provided it is within reasonable limitation. The peridental tissue is endowed with certain characteristics and functions that enable it to develop a specialized tissue that is designed to do an extra amount of work, and this is known as adaptive hypertrophy. This undoubtedly accounts for the thickened membrane shown in radiograms of the roots of supporting teeth for bridges. This thickening of membrane is a normal reaction to increased stress and movement and is not akin to that caused by infection within the gingival space. It, in a large measure, explains the long and successful service of a well constructed bridge. This specialized tissue is easily injured and difficult of repair, particularly as it becomes attached to the periosteum and gum tissue and it is here the fixed type of bridge aids in its protection while the removable type offers a source of irritation. The tissue surrounding natural teeth is definitely designed to receive the occlusal force placed upon the cusps and crowns of teeth and the periosteum was not intended to bear the stress conveyed by saddles used in removable bridge construction. In regard to the supporting teeth of a fixed or a removable bridge, scientific principles support the use of the fixed bridge rather than the removable. In replacing missing teeth by any form of bridgework the chief aim should be to obtain maximum efficiency in the restoration of function and to obtain this with the least injury to the supporting natural teeth. More efficiency is to be expected where stability is greatest, which is undoubtedly afforded by the

use of the fixed type of bridge. The opportunity to reproduce anatomical form offering a protection to the surrounding tissue involved in bridge construction is greater in the fixed type than in the removable. The mutilation of natural tooth substance of supporting teeth necessary to receive the modern form of attachment for removable work is greater than that required for the attachment of a fixed bridge. The mechanism involving the frictional part of certain attachments commonly used in modern removable work is such as to frequently demand repair and adjustment, since all metal to be employed in this manner must suffer a lost resiliency known as fatigue of metals. The great advantage claimed for the removable bridge, and which at first appealed so favorably to patients, is that it lends itself so conveniently to cleanliness and sanitation. The belief that the fixed bridge is not conducive to the proper sanitation is due entirely to faulty construction. A careful observation over a long period of time has borne proof that a well constructed fixed bridge in the mouths of patients, possessed of clean habits, will present as clean surfaces of the teeth forming the bridge as will be observed on the remaining natural teeth. Its censure in this respect came from poorly fitted bands, overhanging inlays, indifferently constructed pontics and a general lack of anatomical form and contour in the various parts forming the bridge. The removable bridge has, however, a definite place in dental practice and it is where the stress to be carried is beyond the tolerance of the supporting teeth for a fixed bridge. It begins where the fixed bridgework ends. Where the replacement of lost tissue in addition to missing teeth is required no other form of restoration offers the advantages possessed by the removable bridge. It is then an intermediary between fixed bridgework and partial dentures and this is its proper place in prosthetic

dentistry. It will render a definite and useful service to patients, when properly constructed.

If we are to give the maximum service in this branch of dentistry it is highly important that we have knowledge and experience in all the different methods of replacing lost teeth, for without these we cannot hope to accomplish the greatest good. A broad view of the whole field is essential to success. Each case is a law unto itself and it calls for discrimination and good judgment. To claim that all cases coming to us for treatment can be best cared for by the use of any one method is retrogressing rather than progression. It is turning a deaf ear to the "knock" of opportunity and this is not in accordance with the rapid advancement of dentistry today. A keen foresight of the requirements of each case, together with sound judgment in the selection of the method to be used, are the first and most important requisites for success. In recent years it is interesting to note the rapidity with which new practices have arisen in dentistry, and without discrimination and good judgment confusion and discouragement must result.

It is acknowledged that much good has been done for patients by the use of bridgework, and yet those of us who have employed it have fallen far short of accomplishing all we might have done with it. It is depressing to see the mouths of patients more or less advanced in life who have some years previously suffered the loss of one or more teeth without anything being done, early, to replace the loss. Function has been impaired, but equally important and more difficult of restoration is the damage done to one or both arches by reason of the space that has been lost, the malposition of teeth on either side of the one extracted, the elongation of the opposing teeth, together with a loss of character in facial expression. This is particularly true in case of loss of

any of the first permanent molars. Where the second bicuspid and second molar are fully erupted some means of maintaining the space should immediately be employed and a well constructed fixed bridge will best serve this purpose. To delay bridging when required for young patients is analogous to the old mistaken idea that gold foil filling should not be inserted in the teeth of young patients. The failure to recognize the importance of early restoration has done serious injury to a vast number of human dentitions. The old prophecy that the second and third molars would assume increased responsibility and fully replace the missing molar never came true. It is my firm belief that the loss of the first permanent molar, and particularly the lower, without early replacement, has been accountable for more injury to the human mouth than any other one misfortune that has befallen it. Early treatment of these cases by bridgework is imperative and no ordinary responsibility rests with us if we neglect to use it.

Malposition of the remaining teeth following the removal of any of the first permanent molars is a common sequence, and this is true, only to a less degree probably, when teeth other than the first molar are lost. Where these spaces have been bridged it has been common procedure to use teeth that were to be the supports for the bridge as they were found—migrated, inclined, or in brief, malposed. Where these conditions have existed for any time there is usually some disturbance to the health of the surrounding tissues and, if not already present, it is only a matter of time until a pathological condition arises. To demand increased labor of such a tooth by employing it in bridge construction without first bringing it into proper alignment is not good practice. Especially in the younger class of patients, correction of the position of deranged teeth should be accom-

plished previously to inserting a bridge. To do this embraces some knowledge of orthodontia or the cooperation of an orthodontist, and here I wish to pay my respects to the members of that specialty for the interest they have manifested in this part of our work. The simpler cases of malposition come within the field of the general practitioner and should be cared for by him particularly where the movement of but a single tooth is involved. If the case demands extensive treatment it is worthy of the care of the specialist. When the position of the teeth has been corrected prior to bridging, it results in the restoration of their normal function and occlusion, a better position to withstand stress, improved hygienic conditions, and obtaining the original dimensions of the arch. Intrusion of the elongated teeth opposing the space, provided this is not marked, and the patient is young, should be made while the other teeth are being moved to their correct positions. If intrusion is too great, a partial grinding away and polishing the cusps may suffice, and it may be necessary where elongation is well advanced to cut away a portion of the occlusal surface and insert an inlay, properly carved, for cusp restoration. Whatever means are employed, this elongation must be corrected if proper occlusion and function are to be had. The bridge then serves as a retaining device as well as a useful means of replacement.

Effort to correct the positions of teeth to be used as supports for bridges in the mouths of patients advance in years, and where there is a marked loss of teeth, is contra indicated. The conditions found in such mouths that have existed over a considerable period of time are well defined. There is always impaired function. There is usually stress imposed on an inclined tooth or teeth. Elongation of teeth is present. A marked decrease from the normal sized arch

prevails. Faulty habits and movements in mastication are established, together with a general lack of sanitation. Delayed treatment is responsible for such conditions and these ulterior forces exerted over a long period of time, make restoration extensive and difficult. The mistake is too commonly made of endeavoring to supply bridges to spaces regardless of a plan for a complete rebuilding of the two arches. When done otherwise no good results. Provision must first be made for the establishment of a permanent and a definite occlusion in the posterior mouth. After the posterior restoration has been securely made the anterior work, whether operative or prosthetic, can then be done. It is a waste of effort to attempt anterior replacement, or even extensive operative work, and neglect posterior restoration, which is so frequently observed. The patient's value of anterior teeth is always greater than that of the posterior and this may account for this unwise procedure in so many instances. The maintenance of good occlusion in the posterior mouth is to be at all times essential, even if for no other purpose than to prevent abrasion of the anterior teeth, for just as soon as the posterior contact of the arches is lost undue injury by wear and trauma ensue. It must always be remembered that the bicuspid, and particularly the molars, are designed to do a work never intended for other teeth. These cases cannot be viewed from any one aspect and if a broad view of restoration is required in any part of dentistry it is in the building of the two dental arches in these extensive cases of reconstruction to the form and usefulness originally possessed by that individual. This usually involves many methods and types of work and we should follow nature's plan in its accomplishment. A full consideration of cases where the loss of teeth has been extensive and treatment has been delayed is a lengthy topic in itself and

time affords but a reference to it. It can be said, however, that the successful restoration of such cases offers much of vital interest in dental practice.

Since it has been requested that the discussion of this subject at this time is to be confined to the indications for bridges rather than their construction, apologies for a brief reference to the structural feature of bridgework are here made. While no one part of any successfully made structure supersedes any other part in importance, the attachments for bridgework, whether fixed or removable, are vital considerations. Too often dentists have been enslaved to the use of one or a few types of attachments. The broad use of all the different forms and types is to be considered and employed if all requirements are to be successfully met. No greater charge has been laid against the use of bridges than that of mutilation of natural tooth substance of the supporting teeth before or after their employment. That this is a justifiable claim against bridge work in certain instances cannot be denied. With equal honesty, it can be said that where any just claims of this nature are made, either lack of skill or good judgment, or both, are at fault, and these must be held accountable rather than the principle. Teeth are not usually lost without first being invaded by ravages of caries, and this invariably spreads to the adjacent teeth and on the surfaces adjacent to the spaces. In these teeth cavities or fillings are usually found, the latter many times in need of repair. Here the inlay, specially constructed for an attachment for a bridge, is distinctly indicated and by its use affords a dual purpose; an attachment to a supporting tooth and a restoration of the individual tooth to prevent further decay. In such a case a bridge can be constructed, leaving the supporting teeth in a better condition than they formerly were.

with the additional advantage of an attachment for a bridge. It might cause surprise if records were made, how frequently such conditions arise. The point to be made is, that conditions should be accepted as we find them and we should employ the form of attachment that meets these conditions, instead of making each tooth fit a type that is popular with the operator. In other words, why construct a so-called "three-quarter crown" to a tooth in which there is a cavity or a filling in the surface adjacent to the space? In teeth free from defects employ attachments that will produce minimum destruction of tooth tissue and irritation to surrounding tissues, with a maximum strength for the work they are intended to do. Personal equation plays a strong part in all branches of dentistry. Certain operators become so skillful in certain operations that they become enthusiasts and advocate that method to the exclusion of all others. All operators cannot do all operations with equal skill and this should be recognized. There is a definite place for each type of attachment and their

choice must be wisely made for the individual case. Before concluding this phase of the subject it should be said, that a well developed skill and judgment are necessary to success, and without these bridgework will not render us, or our patients, the full measure of satisfaction that otherwise might have been enjoyed.

It has been my earnest endeavor throughout the entire discussion of this subject to impress upon you the forces that have made themselves felt upon the practice of bridgework, from the earliest times to the present, with the object that we should at all times so employ the dental bridge that its application is made in the light of all the knowledge that we have today. With a regard for the time allotted me, much of importance has been left without even a reference. It is with the hope that what has been presented will inspire a broader vision of this work to the end that there is a better understanding of conditions following the loss of teeth, together with a better understanding of their replacement.

Surgical Conditions in the Mouth in Relation to the Dental Practitioner

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The field of the dentist in regard to remedying defects of the teeth and their investing tissues is well defined. But in the broader field of pathological conditions in the mouth and surrounding parts, perhaps demanding surgical treatment, or perhaps requiring a knowledge of pathological processes of the body as a whole, the functions of the dentist are not quite so well established. In discussing this question we must begin by acknowledging that the fundamental basis for all rational treatment are a knowledge of pathology and the making of a correct diagnosis. The dentist, to be a safe practitioner, must be a good diagnostician, and in order to be a good diagnostician must have a knowledge of the pathology not only of the teeth themselves, but also of the surrounding tissues of the mouth and adjacent parts. Ability to mechanically place a beautiful filling or piece of bridge-work is essential, but this becomes useless, and may be dangerous, if the dentist ignores the pathological conditions about the apex of the tooth selected for such restorative work.

The dentist is often the first to see lesions in the mouth and adjacent parts upon the early diagnosis of which may depend the life of the patient. Even though he limits his practice to routine dentistry he should be able to recognize conditions which demand surgical attention. Although an intimate knowledge of technical surgical treatment is not necessary, he should know in a general way what can be done in surgical conditions of the mouth. As an example, the dentist should have a good idea in cleft palate when the patient should be referred for operation

rather than be supplied with an obturator, but need not be familiar with all of the details of cleft palate operations. He should know how to go about the differentiation of a chancre of the lip from an epithelioma, but need not be expert in the intravenous administration of arsphenamin.

A tuberculous gingivitis in the beginning may have many characteristics of pyorrhea—the formation of pockets around the necks of the teeth, suppuration, and loosening of the teeth. The tuberculous condition, however, will grow progressively worse in spite of local treatment and the gums will not heal after extraction, but ulceration and destruction will continue. We have seen cases of this character which were regarded as ordinary pyorrhea but which were finally referred because the gums would not heal after extraction. Inasmuch as tuberculous ulceration of the mouth usually means tuberculosis farther down the respiratory tract, the importance of its early recognition is obvious, I need hardly remind you also of the importance of recognition of early cancer and precancerous conditions in the mouth.

In investigating a particular case of disease in the mouth or adjacent region for the purpose of diagnosis, the beginner at least should have firmly fixed in his mind a definite order and method. As he gains experience he will be able to suit his examination to particular cases that present themselves, but at first the definite rules should be adhered to in order that nothing of importance be overlooked.

The routine employed in arriving at a diagnosis consists in the following steps:

1. *The history of the patient.* This includes name, address, age, sex, social condition (single, married, widow), nativity, occupation, chief complaint, habits, etc.; *history of present trouble; family history; previous medical history.*

2. *Examination of the affected part and adjacent region.*

3. *General physical examination.*

4. *Laboratory examinations.*

1. *History of the patient.* One of the first questions to be asked the patient is regarding his *chief complaint*, i.e., the trouble for which we are consulted, which immediately draws our attention to the site of the disease and the line of investigation to be adopted. Probably most frequently the chief complaint will be pain, of a certain character, in some particular region. In other cases it may be the presence of a swelling, of an ulceration, of bleeding, and so forth.

The *age* of the patient is important in many cases. Cancer usually appears in middle aged or old persons.

Sex. Cancer of the mouth is much more common in men than in women, so is leucoplakia.

The *occupation* sometimes affords an important clue to the diagnosis. Several forms of metallic poisoning with manifestations in the mouth are acquired directly through the occupation of the individual, e.g., lead poisoning.

Habits. Chronic irritation of the mucous membrane of the mouth is frequently produced by excessive use of tobacco. Persons of unsanitary habits of living are more predisposed to mouth infections than those who pay more attention to personal cleanliness.

History of present trouble. The patient should be questioned as to when and how the disease began, its rate of growth, whether painful or

not, character of pain, other subjective symptoms, previous treatment if any, whether getting better or worse. Benign tumors increase in size very slowly, may be present for several years, are usually not painful. Malignant tumors usually give a history of only being present a few months or weeks, grow rather rapidly, and are usually painful. In malignant tumors and tuberculosis there is usually loss of weight and strength, and inquiry should be made as to the general health of the patient.

Family history. Valuable information can sometimes be obtained by inquiry as to the parents, whether living and well, or if dead, cause of death. The same applies to sisters and brothers, and children. Tuberculosis of parents or members of the immediate family is of great significance as denoting probable constant exposure of the patient to infection. In a child suspected of congenital syphilis, the parents should be examined for this disease.

Previous medical history. In case of a suspected late or tertiary syphilitic lesion, inquiry may reveal that the patient has had a primary sore and other manifestations of syphilitic infection. In suspected tuberculous ulceration of the month, the patient may give a history of suffering from a cough or other symptoms of pulmonary tuberculosis for a considerable period of time.

2. *Examination of the affected part and adjacent region.* The affected part may show a swelling or an ulceration, a sinus discharging pus, or a bleeding area. In the case of a swelling, the size, shape and color are noted by inspection. By palpation, one determines whether the swelling is hard or soft, whether it has an elastic feeling, whether fluctuation due to fluid is present, whether there is tenderness, whether there is undue warmth. In the case of ulceration, the number of ulcers present, the shape, depth, color, regularity or

irregularity of edges, size, etc., are determined by inspection. Palpation reveals whether the base of the ulcer is hard or soft, tendency to bleed easily, tenderness. The origin of a sinus discharging pus may be determined by probing. The general condition of the mouth, teeth, gums, tongue and tonsils should be noted. The neighboring lymph nodes should be examined. If enlarged, the character of the enlargement as to size, tenderness, etc., may be important. Trismus, or acute limitation in opening the mouth, is an important sign of acute inflammatory conditions about the molar region of the mandible. Often in swellings or other abnormalities around the teeth, tests for pulp vitality should be made.

3. *General physical examination.* It is not expected that the dentist should become proficient in making examinations of the heart, lungs and other parts of the body, but he should know when such examinations would be of advantage in throwing light on manifestations of disease in the mouth, and the general meaning of such examinations. The temperature, pulse, respiration and blood pressure findings are often of significance. The color and general nutrition of the patient may be affected by abnormal conditions in the mouth. In late carcinoma there may be a peculiar pallor (cachexia) from toxic absorption, together with anemia and emaciation. Certain diseases have skin manifestations in addition to mouth symptoms. Among these are pemphigus, lichen planus, scurvy, and syphilis. In late syphilis, in addition to mouth lesions, scars or marks of syphilitic lesions may be found in other regions of the body. In suspected tuberculous ulceration of the mouth, the patient is usually emaciated and anemic. Examination of the lungs may reveal evidence of tuberculosis there, as the mouth condition is nearly always secondary to the lung disease. In cases of persistent hem-

orrhage from the mouth, generalized enlargement of the lymph nodes, or of the spleen, may lead to further investigation as to whether leukemia is responsible for the hemorrhage.

4. *Laboratory examinations.* These include radiographic; blood; serologic, urine, bacteriologic smears, cultures, animal inoculation; examination of tissue.

Radiographic examination is an invaluable means of diagnosis in practically all lesions involving bone and teeth. By pathological laboratory methods we are very greatly helped both in the diagnosis of the lesion itself and also in forming an accurate idea of the general condition of the patient. The latter knowledge is obtained in part by examination of the blood, by which we determine the presence of anemia, and whether the patient has the power to resist the infection whatever it may be. In suspected leukemia, much depends for diagnosis on the blood picture. Examination of the urine gives information as to the condition of the kidneys, and also the presence of sugar, suggesting diabetes. A stubborn case of pyorrhea may have diabetes as an underlying factor, revealed by urinalysis and will yield more readily to local treatment by placing the patient on antidiabetic regimen. As bearing directly on the diagnosis of the lesion present in the mouth, certain laboratory procedures are of especial value. Smears and cultures examined bacteriologically may determine the nature of the causative agent, as the spirillum and fusiform bacillus of vincent, the spirochaeta pallida in the primary stage of syphilis, streptococcus infection, actinomycosis, etc. Inoculation of guinea pigs with scrapings from a tuberculous ulcer may be necessary before the diagnosis is established. A portion of the tissue from a tumor or edge of an ulcer may be removed under local anesthesia and the diagnosis made by microscopical examina-

tion. In the secondary and later stages of syphilis, the diagnosis may be made by the presence of a positive Wassermann reaction in the blood serum.

The foregoing indicates briefly the various measures that may be carried out in diagnosing pathological conditions in the mouth. For diagnosis it is of course not always necessary to perform as complete an examination as outlined. On the other hand, cases are occasionally met which baffle the most exhaustive measures of investigation.

Conditions sometimes requiring care in diagnosis are manifested in acute inflammatory swelling in the submaxillary triangle. These acute swellings are most commonly due to extension of dental infection. The pus of an acute dentoalveolar abscess in the lower jaw frequently perforates the bone high up opposite the root of the tooth, in which case the abscess points into the mouth. If the bone is perforated low down, however, the pus will strip up the periosteum for a varying extent and then pass into the soft tissues of the submaxillary triangle, gradually approaching the skin. Submaxillary abscesses of this nature therefore, as Sebileau has pointed out, are due to direct extension from the periosteum and bone and are not purely a suppuration of the lymph nodes as commonly taught. A very valuable sign that an acute swelling in the submaxillary region is of dental origin is *trismus*, or limitation of opening of the jaws. This is practically always present in acute inflammatory involvement of the bone and periosteum around the molar teeth, and in its absence other causes for the submaxillary swelling should be sought, e.g., tonsillar infection, or ulceration of the soft tissues of the mouth, etc. Another condition causing acute or subacute swelling in the submaxillary region which is commonly mistaken for a lymphadenitis or cellulitis due to dental infection, is

enlargement of the submaxillary salivary gland from obstruction of Wharton's duct by a calculus. In most of the cases that have come to us the patients have been told that the trouble was due to infection from the teeth and have had one or more teeth extracted without relief. The patient will generally give a history of several previous attacks, with increase of pain and swelling especially during meals. In addition to the tender circumscribed swelling in the submaxillary region, there will usually be a painful swelling in the floor of the mouth, and difficulty in swallowing. Trismus is usually absent. A tender nodule—the calculus—may be felt somewhere along the course of the duct in the floor of the mouth by combined intraoral and extraoral palpation. The diagnosis will be confirmed by X-ray examination. A No. 2 film ($2\frac{1}{2} \times 3\frac{1}{4}$ in.) is placed in the bite position between the upper and lower teeth as far back in the mouth as possible with the sensitized side down and the rays directed from beneath the chin. A calculus in the anterior three-fourths of Wharton's duct will cast a shadow on the lingual side of the teeth and jaw. If the stone is farther back, near the beginning of the duct, a lateral extraoral film may be required to show it. The extraoral method of examination for small stones in the anterior part of Wharton's duct is generally unsatisfactory, as the stone shadow may be covered by that of the mandible.

Many other examples could be given to illustrate that this *diagnostic* function constitutes one of the relations, perhaps the most important relation of the general practitioner of dentistry to surgery. Closely bound up with accurate diagnosis is the ability to estimate which cases the general practitioner himself is capable of handling and which to refer to a specialist from the beginning.

As to the actual scope of the surgical procedures that come within the

field of the general practitioner of dentistry; this depends in part upon whether he is practising in a small town or in a large city. In a small town, conditions may prevent one from devoting all of his time to oral surgery, so that here the general practitioner might be expected to perform many minor surgical operations in the mouth which in a large city would naturally be referred to a specialist. So that it is difficult to lay down hard and fast rules to cover all conditions. Every dentist who contemplates doing much oral surgery should by all means associate himself with a hospital. A hospital internship furnishes the best possible training for this work. By this association with general surgeons and medical men and sick patients, experience is gained that cannot be obtained by years of office practice.

There is no question that every general dental practitioner should be familiar with the technique of tooth extraction. For this it is entirely unnecessary to have the extensive equipment, large array of forceps, etc., that one sees in the establishments of our friends the exodontists. The aim should be quality of the work done rather than quantity performed in a given time. Nothing is less in accord with modern principles of surgery than the haste often exhibited in removal of eight or ten teeth under nitrous oxide anesthesia. Roots are frequently broken off and left behind, gums are torn, and projecting jagged edges of alveolar process are left for slow absorption by nature. In the opinion of the writer, local anesthesia by procain-suprarenin is the method of choice for the routine extraction of teeth. With this method the operator can do his work with deliberation and accuracy, being unhampered by excessive bleeding and limited time. He can avoid undue laceration of the gum tissue, curet as much as necessary, trim off excessive alveolar process, and if necessary place a suture here and there to protect the

exposed bone with soft tissue so that healing will take place rapidly and smoothly, with no prolonged waiting for absorption to take place before artificial dentures can be worn. It is entirely unnecessary in routine extraction work to resort to the so-called surgical flap method and alveolotomy. This method is very useful in its place but should be reserved for cases where it is desired to obtain full exposure for curetting a periapical area of disease in the bone or for the removal of broken off roots which cannot be readily grasped with the forceps or elevator without damaging the bone.

The most important factor in connection with local anesthesia is the observance of strict asepsis. Only syringes and needles that can be *conveniently* sterilized by boiling each time before use, should be employed. No dependence should be placed on flaming the needle alone without sterilizing the syringe. The keeping of syringes in solutions of alcohol and glycerin or other chemical methods should not be relied upon for sterilization. One can never be certain that the interior of the syringe is sterile under these circumstances. The sight of the so-called sterilizing jar for syringes in the dental office gives one the same feeling as that of the "Antiseptic Sterilizer" case in the barber shop. It may have a psychologic effect on the lay mind.

The dental practitioner is often confronted with the problem of dealing with acute dento-alveolar abscesses and complications arising therefrom. The development of such an abscess is usually the fault of the patient, or of the parents if the patient is a child, for neglecting the teeth until an abscess forms from a dead pulp. Subsequent complications, osteomyelitis, periostitis, cellulitis, etc., are frequently fostered by the application of a flaxseed poultice to the face. The dentist is usually blamed if complications arise, regardless

of the course he pursues. If he extracts an acutely abscessed tooth, and bone infection develops, it may be claimed that the extraction caused the infection to spread. If the dentist does nothing, and osteomyelitis occurs, he is then blamed for not removing the tooth. While as a general proposition it may be said that the abscessed tooth should be extracted, yet I believe there is in the individual case an opportunity for the exercise of judgment as to just when to remove it. The principal point is to establish drainage early by an incision to the bone. If the case is in the fulminating stage, before frank suppuration has set in, with resistance low, extraction at that time may do harm. If, however, pus is seen welling up around the tooth, or there is a distinct collection beneath the surface of the tissues, drainage may be greatly aided by extraction. One thing is certain, if the dentist who sees a case of this kind is unwilling to accept full responsibility for the consequences of his advice or treatment, he should refer the patient to someone whose experience makes him competent to handle the case in all of its phases. After extraction in a case of acute abscess, the socket should never be curetted, as the infection will probably be spread by this procedure. Where the dento-alveolar abscess points into the mouth, drainage can usually be accomplished by an incision through the gum. Drainage of a dental abscess pointing in the submaxillary region is best effected by incision through the skin, beneath the lower border of the jaw, usually under gas anesthesia. Made carefully, the incision leaves but a trivial scar after healing. Under this treatment, the majority of cases of acute dento-alveolar abscess get well in a short time. Sometimes, however, the pus, instead of making its exit through a perforation in the bone, near the point of origin, spreads through the cancellated tissue of the mandible, caus-

ing osteomyelitis. In children, the follicles of unerupted teeth are very favorable to the development of osteomyelitis. In other cases the periosteum is stripped off the bone to such an extent as to destroy the vitality of a certain portion. In either case, some of the bone will die. When it is evident that some necrosis will occur, waiting for the separation of sequestra by natural processes brings about far better end results than radical removal of the diseased bone. By attending to proper drainage and cleansing by irrigation and then removing sequestra as they form it is possible to have the lost bone almost completely replaced by new bone, with avoidance of great deformity and interference with function. On the other hand, if the diseased bone is resected before complete sequestration, there is generally great interference with regeneration, resulting in unsightly distortion of the face, malocclusion of the teeth, or non-union of the remaining portions of the bone and the normal occlusion of the remaining teeth by the application of suitable splints or ligatures to the teeth before the removal of sequestra, so that after the dead bone comes away the remaining portions of the jaw will not collapse, but will stay in proper position until new bone formation fixes it permanently. Where this has been done it may require a series of operations or prolonged orthodontic treatment to even imperfectly approach normal conditions.

If space permitted, several other phases of this subject could be dealt with such as, the relations of the maxillary sinus to the teeth and mouth, tumors of the mouth and jaws, fractures, root resection, etc. It is especially desired to emphasize that if the dentist knows his pathology and knows how to go about making a correct diagnosis, the question of surgical technique can be left for secondary consideration.

Principles Relating to Dental Health

The American Society of Orthodontists subscribes to the following affirmations of items and principles relating to dental health.

Whereas, The correction of malocclusion is primarily a health measure; and

Whereas, The only solution of dental health, both locally and in its relation to general health, lies in the prevention of oral disease; and

Whereas, Dental prevention is effective in inverse ratio to the age of the patient, children's dentistry is the logical field of preventive measures; and

Whereas, The orthodontist needs the complete co-operation of the dentist to insure and maintain dental health before and during orthodontic procedure; and

Whereas, The principles of prevention, listed herewith, have been endorsed by fifteen state dental conventions, three national dental associations, and the Federation Dentaire Internationale; namely:

Proper attention to initial defects,

Particular care and attention to all pits, fissures and grooves before caries appears,

No cavity is too small to fill,

The deciduous teeth should have the

same care and attention as the permanent ones, as their maintenance in health is essential to the proper development of adult occlusion; and

Whereas, Disregard of these principles and practices of accepted dental teachings constitutes transgression of professional obligation to the patient and a serious handicap to orthodontic procedure; therefore be it

RESOLVED, That this declaration of policy is the unanimous expression of the belief of this organization, whose members are called upon to uphold it in all their relations with the dental profession and the public; and be it further

RESOLVED, That these resolutions should be displayed in each orthodontic office and a copy sent to the dentist responsible for the care of the patient immediately on the acceptance of a case; and be it further

RESOLVED, That this action be given publicity in professional journals and copies sent to the secretaries of various state, national and international dental organizations and to dental school associations.

The above resolutions were adopted by the American Society of Orthodontists in annual session, May 2nd to 5th, 1927, Chicago, Illinois.

SOCIETIES

Ontario Dental Association

Minutes of meeting of the Ontario Dental Association held at the King Edward Hotel on Wednesday, May 18th at 2.30 p.m.

The President, Dr. J. A. Bothwell, acted as Chairman.

Dr. Conboy spoke on the Constitution and By-laws adopted by the Canadian Dental Association; membership; membership fees, etc., and stated that by joining the Ontario Dental Association, one became a member of his own Provincial Association, and a member of the Canadian Dental Association.

Dr. Conboy further presented the Constitution and By-laws of the Canadian Dental Association and suggested that it might be referred to the Board of Governors, to be gone over carefully.

Moved by Dr. Conboy and seconded by Dr. Willmott that the Constitution and By-laws of the Canadian Dental Association as submitted by your Delegates be approved in the main and referred to the Board of Governors that they may go into the matter in detail and see that it is satisfactory to the Ontario Dental Association and if so, the whole scheme to be accepted.

Carried.

Dr. H. Clarke, President of the Dentists' Legal Protective Association was then called on for a report. In the absence of Dr. Clarke, Dr. Willmott, Secretary of the Protective Association, spoke. He stated that in the first place, their annual fee entitled them to all the privileges of

the Protective Association. That while the Association would not take any part between the dentist and his patient regarding fees, misfitting dentures, or fillings that have come out or bridges that were no good, if a dentist got in trouble with his patient, to write the Association who would advise him as to what they considered his right. That they had had a number of instances where there was some misunderstanding between the dentist and his patient regarding work not satisfactory, and the Solicitor of the Association had advised whether to return part, or all of the fee paid for his own good in the community, etc.—That if a case of suit for mal-practice is brought against any dentist, the Dental Protective Association will assume responsibility, provided it had the handling of the case from the inception. If the matter had been referred to someone else they would refuse to touch it. Mr. Hellmuth was the Solicitor of the Dentist's Protective Association.

At this point the question was asked: "I have an Insurance Policy—What is the use of having insurance and belonging to the Association as well?"

Dr. Willmott replied—"Just this—if you have a suit for mal-practice and you lose the suit, the Insurance Company pay the damages. If we conduct the suit and lose,—you pay the damages."

Dr. Willmott then read the treasurer's report as follows:

Dentists' Legal Protective Association

Financial Statement, Year Ending,
April 30th.

Cash from last year	\$4,484.39
Fees 1925-26	18.00
Bank Interest	130.85
	\$4,633.24
Bank Exchange	\$.40
Expenses Executive Com- mittee	5.70
Printing and Folding two notices to Profession and 3,600 enveloped . . .	51.88
Addressing & Mailing & Postage	46.50
Honorarium to Secretary- Treasurer	100.00
	\$ 204.48
On Hand	\$4,428.76

Moved by Dr. Willmott, seconded by Dr. Walker that the Treasurer's report be adopted. Carried.

Moved by Dr. Bothwell, Stratford, seconded by Dr. Davidson that the Executive of the Dentists' Legal Protective Association be the same as last year. Carried.

Dr. Harold Clarke, President.
Dr. W. E. Willmott, Secretary
Dr. Wallace Seccombe
Dr. R. G. McLean
Dr. W. G. Thompson
Dr. F. J. Conboy

Dr. A. E. Webster was called by the President to tell the Society of the development of Canadian Dentistry in far off and much disturbed China. Almost twenty years ago Dr. Lindsay was sent out to China by the Canadian Mission Board to care for the teeth of missionaries and to later establish dental education in China. The work prospered and others were sent out until at the present time there is a faculty of dentistry established in China in the Union University. Chinese are now

being graduated and a Dr. Whang has been sent to Canada to complete his training so that when the present disturbance subsides he may be in a position to carry on the work. It would appear that Chinese in the future will be at the head of all educational institutions in that land. A couple of years ago a group of Canadian dentists agreed to finance a Chinese graduate for two years in Canada if the Mission Board would pay the travelling expenses. The Royal College of Dental Surgeons and the University have assisted, Dr. Whang is a good student and has done well this year. We explain all this to you so that if at some time you are given an opportunity to assist in setting up a Canadian Dental Outpost in China you will understand what it is all about.

Dr. Willard Armstrong presented the report of the nominating Committee as follows:

Hon. President: J. A. Bothwell, Toronto.

President: A. E. Webster, Toronto.

Vice-President: T. F. Campbell, Galt.

Archivist: C. A. Kennedy, Toronto.

Secretary-Treasurer: F. J. Conboy, Toronto.

And to the Board of Governors,
S. A. Moore, London.

W. H. Woodrow, Brockville.

To Oral Hygiene Committee:

A. W. Ellis

J. C. Livett

F. C. Husband

R. J. Reade.

W. R. Armstrong.

Moved by Dr. Armstrong; seconded by Dr. Marshall that the above report of the Nominating Committee be adopted.

Dr. Husband moved an amendment to the motion; seconded by Dr. Murphy that these names be received in nomination only.

The Chair was requested to explain the motion and the amendment. The Chairman called on the

Secretary to read the motion and amendment and he explained that if the motion was carried, those named by the Nominating Committee would be the officers for next year. The Amendment was that these names be accepted in nomination for the various offices. If the amendment carries, these will not necessarily be your officers for next year but you will have the opportunity of nominating others and there will be an election by ballot. If it was the wish that the names read be the officers for the ensuing year, they were to vote for the motion; if otherwise to vote for the amendment. The President then put the amendment which was lost.

An amendment to the amendment was then made that they take the names presented as nominated for the different offices, and that the names submitted for President and Vice President be closed and that they vote on the other officers. As this was in reality the same as the amendment just voted upon, it was not pressed.

At this point Dr. Fleming of Preston asked for more information. He remarked—"the names that have been nominated by the Chairman of the Nominating Committee—some of them are familiar to us—some are not. I have no objection to any man that has been nominated but I could vote more intelligently if I knew where these men came from. As a member of the Ontario Dental Association, I feel that the members of the Board of Governors should be spread over the Province and I think it is in the best interest of the Society that the Officers of the Association should represent all parts of the Province. Therefore, I feel that I, and there are no doubt others as helpless as I am, could vote more intelligently if we knew where these officers resided."

The Chairman then stated that when the President appointed the nominating Committee they were se-

lected from ten names submitted by the Board of Governors. These men, he felt sure, were representative men in that they were outside of Toronto, one from Ottawa, Belleville, Richmond Hill and one from London. He felt that the men nominated were from various sections of the Province and represented different bodies of dentists. He then called upon the Chairman of the Nominating Committee to read the names and resident places. This was done.

At this point it was voiced that it would be well to remind the gentlemen that there were some on the Board of Governors that were elected for a term of years.

The Chairman then stated that according to the Constitution they had six members of the Board of Governors that are selected—two were elected each year for a period of three years. The present nominees were Dr. Moore of London and Dr. Woodrow of Brockville.

Dr. Fleming then stated that as they now had the information asked for he thought it a very good list and that a lot of time could be saved by accepting the report of the nominating committee.

The President then stated that the amendment was lost and asked that the original motion with the names submitted by the Nominating Committee be accepted. And asked "what is your pleasure regarding the motion that these men in nomination be declared elected?"

The President put the motion and it was declared.—Carried.

Dr. Russell W. Tench of New York was then called on and gave his interesting paper on impressions for "Full Dentures" followed by explanatory remarks.

Dr. W. N. Moore, of Chicago, then gave his interesting paper on "A Broader Vision of Bridgework."

Dr. Roach was then called upon to discuss the two papers, by Dr.

Tench and Dr. Moore. Dr. Roach remarked that neither of these two papers was he familiar with. He had not had an opportunity of knowing what Dr. Tench was going to say; only last night had he read Dr. Moore's paper. Dr. Roach then gave a short discussion of each paper.

The President stated that the next paper was by Dr. Andrew J. McDonagh on "A Study of Bacteria in Living Pulp" Dr. McDonagh being

ill and unable to come, his daughter, Dr. Aileen McDonagh read her father's paper.

Dr. Bothwell was forced to leave before the close of the Session to attend the Reception at the Granite Club. Dr. Fleming took the chair in his absence and at the close of the meeting Dr. Conboy on behalf of the Board of Directors, thanked the members for their co-operation in making the meeting a success.

Dominion Dental Council Examinations

The following have passed their Dominion Dental Council examination June, 1927, in the following subjects:

Pathology and Bacteriology.—P. G. Anderson, M. H. Boykowich, J. A. Burskin, H. A. Carman, J. Carroll, J. W. Dobson, N. H. Greenberg, G. C. Hare, C. D. Husband, R. V. Little, V. M. Lloyd, H. F. Moffatt, J. M. McCaffery, A. Rabinovitch, C. T. Rodger, Singer, C. L. Skinner, J. E. Tilson, C. E. Toll.

Pathology (only).—A. H. Demuth, A. W. Irwin, B. Johnson.

Bacteriology (only).—L. D. Carmichael, O. J. Davies, J. C. Dempster, C. M. Lowry, G. C. Layter, A. M. Revell, H. M. Robb, W. J. Siebert, C. S. Simpson, K. C. Wasson.

Orthodontia, Jurisprudence and Ethics.—S. R. Adam, J. A. Burskin, H. A. Carman, J. Carroll, A. H. Demuth, J. W. Dobson, H. M. Eaton, N. H. Greenberg, A. B. Haverstock, S. W. Holt, L. G. Israel, B. Johnson, V. M. Lloyd, J. M. McCaffery, I. G. G. Polack, A. Rabinovitch, C. T. Rodger, A. Singer, G. C. Squire, J. E. Tilson, C. E. Toll.

Orthodontia (only).—L. D. Carmichael, O. J. Davies, G. C. Hare, G. C. Layter, H. F. Moffatt, J. C. Dempster.

Jurisprudence and Ethics (only).—S. J. Lesco.

Anaesthetics.—S. R. Adam, P. G. Anderson, J. A. Burskin, H. A. Carman, L. D. Carmichael, J. Carroll, O. J. Davies, J. C. Dempster, A. H. Demuth, J. W. Dobson, H. M. Eaton, N. H. Greenberg, G. C. Hare, A. B. Haverstock, C. D. Husband, A. W. Irwin, L. G. Israel, B. Johnson, G. C. Layter, V. M. Lloyd, H. F. Moffatt, J. M. McCaffery, J. A. MacDonald, A. Rabinovitch, H. M. Robb, C. T. Rodger, A. Singer, J. E. Tilson, C. E. Toll.

Materia Medica and Therapeutics.—Wm. R. Aunger, J. A. Burskin, B. Claman, Lloyd Davis, A. H. Demuth, J. W. Dobson, H. A. Galshy, W. P. Gruar, F. M. Hall, B. Johnson, G. Kingman, G. C. Layter, V. M. Lloyd, A. B. Morrow, J. M. McCaffery, S. L. Portigal, M. S. Priest, C. T. Rodger, C. L. Skinner, A. A. Somerville, O. B. Whitman.

Materia Medica (only).—G. A. Buchanan, S. K. Wetmore.

Physiology and Histology.—P. G. Anderson, F. M. Hall, C. M. Lowry, A. M. Revell, C. T. Rodger, W. J. Siebert, C. S. Simpson, K. C. Wasson.

Physiology (only).—W. R. Aunger, J. A. Burskin, J. Carroll, B. Claman, A. H. Demuth, T. Greenberg, W. P. Gruar, G. C. Layter, J. M. McCaffery, S. L. Portigal, C. L. Skinner, A. A. Somerville, S. K. Wetmore, G. W. Whittaker, O. B. Whitman.

Histology (only).—A. H. Bernstein, J. F. Brown, G. A. Buchanan, J. P. Coupland, M. R. Culbert, A. S. Dunn, W. G. Fraser, F. E. Harris, K. I. Levinson, C. J. Patterson, C. S. Robertson, E. Shapera, M. Maclinou.

Operative and Preventive Dentistry.—S. R. Adam, P. G. Anderson, J. A. Burskin, J. Carroll, A. H. Demuth, J. W. Dobson, H. M. Eaton, A. B. Haverstock, S. W. Holt, L. G. Israel, B. Johnson, V. M. Lloyd, J. M. McCaffery, J. A. MacDonald, I. G. G. Polack, A. Rabinovitch, C. T. Rodger, A. Singer, G. C. Squire, M. L. Stitt, G. D. Sutherland, C. E. Toll.

Prosthetic Dentistry.—S. R. Adam, P. G. Anderson, J. A. Burskin, J. Carroll, A. H. Demuth, J. W. Dobson, H. M. Eaton, A. B. Haverstock, S. W. Holt, L. G. Israel, B. Johnson, V. M. Lloyd, J. M. McCaffery, J. A. MacDonald, I. G. G. Polack, A. Rabinovitch, C. T. Rodger, G. C. Squire, A. Singer, M. L. Stitt, G. D. Sutherland, C. E. Toll.

Medicine, Surgery and Radiology.—

S. R. Adam, M. H. Boykowich, J. A. Burskin, J. Carroll, A. H. Demuth, J. W. Dobson, H. M. Eaton, A. B. Haverstock, S. W. Holt, A. W. Irwin, L. G. Israel, B. Johnson, V. M. Lloyd, A. R. Montgomery, J. M. McCaffery, I. G. G. Polack, A. Rabinovitch, C. T. Rodger, A. Singer, G. C. Squire, C. E. Toll.

Physics, Chemistry and Metallurgy.—S. R. Adam, J. A. Burskin, G. A. Buchanan, Ben. Claman, L. Davis, A. H. Demuth, H. A. Galshy, W. P. Gruer, F. M. Hall, R. Harrington, B. Johnson, G. Kingman, G. C. Layter, R. V. Little, C. M. Lowry, A. B. Morrow, J. M. McCaffery, S. L. Portigal, M. L. Priest, A. M. Revell, C. T. Rodger, W. J. Siebert, C. S. Simpson, C. L. Skinner, A. A. Somerville, K. C. Wasson, S. K. Wetmore, G. W. Whittaker, O. B. Whitman.

Metallurgy (only).—J. W. Dobson, H. M. Eaton, A. B. Haverstock, I. G. Israel, H. F. Moffatt.

Chemistry and Metallurgy.—V. M. Lloyd.

Teeth and Health

Members of the Washington State Dental Association, meeting this week in Seattle, are handing out advice to the public that can be received just as profitably in Vancouver as across the line.

These dentists say that the teeth are the most neglected part of the human body.

If we do not see well, we have our eyes looked after.

If we are easily tired and feel

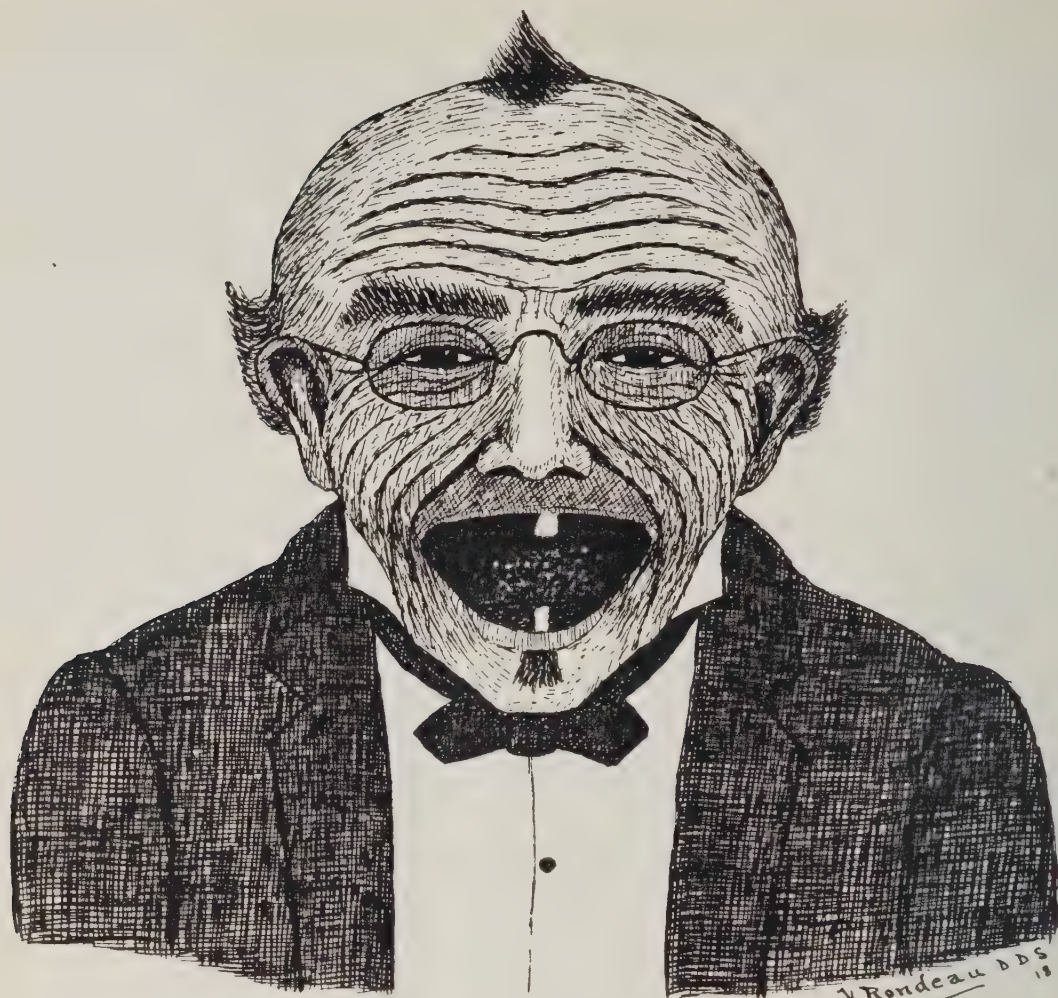
languid, we usually find out the trouble.

But until our teeth break out in open rebellion, we pay little or no attention to them.

Decaying teeth are hotbeds of disease. They generate poisons that pollute the entire body, resulting in protracted sickness or even death.

Bodily health depends to a large extent upon dental health.

Periodical dental inspection is one of the big factors in keeping well.



"Thank God, I have two teeth; and they hit."

The fifth annual meeting of the American Association of Dental Schools will be held at the Mayflower, Washington, D.C., March 26th, 27th and 28th, 1928.

DELOS L. HILL,
Secretary A. A. D. S.

The sixth annual meeting of the

Federation of American Women Dentists will be held in Detroit, Mich., October 24th, 1927. All women members of the American Dental Association welcome.

GRACE ROGERS SPALDING, *Pres.*,
Birmingham, Mich.
MARY B. MEADE, *Secy.-Treas.*,
Carmi, Ill.

Editorial

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Vol. XXXIX

TORONTO, SEPTEMBER, 1927

No. 9

Dental Specialists Regulated in Alberta

The following was assented to and passed by the Alberta legislative Assembly April 2nd, 1927. It was introduced as an effort to limit the "kidding" carried on by dental practitioners in announcing themselves as "specialists" without having any but ordinary qualifications.

2. The Dental Association Act, being chapter 204 of the Revised Statutes of Alberta, 1922, is amended by adding as section 28, the following:

"28.—(1) No person shall advertise or hold himself out to the public as a specialist or as being specially qualified in any particular branch of dentistry or dental work, without having received from the Registrar of the University of Alberta a certificate of having complied with such conditions precedent as to qualification or fitness as may be prescribed by the Senate of the said University.

"(2) The said conditions may be based either upon the possession of certain diplomas or other professional qualifications, or upon compliance with prescribed tests, by way of examination or otherwise.

"(3) Any breach of this section shall be deemed to be unbecoming and improper conduct, within the meaning of section 31 of this act."

The University of Alberta has always worked in great harmony with the professions and this Act of the Government made it com-

pulsory for any "specialist" to obtain the sanction of the central educational body before announcing himself to the public as such. At the meeting of the University Senate following the passage of this Act these recommendations covering this legislation were adopted:

Pursuant to the authority conferred upon the Senate by the above, the Senate is recommended to enact as follows:

1. The term specialist in the meaning of this Act will be defined as follows:

A graduate of a Dental School recognized by the Senate of the University of Alberta who having complied with the educational requirements set forth hereunder seeks the right to practise in some special field of Dentistry in the Province of Alberta.

2. Graduates of a School of Dentistry recognized by the University of Alberta in order to practise a specialty as defined in the foregoing paragraph, must have had at least five years' general practice of Dentistry following graduation, and must have in addition at least the equivalent of one session of graduate work in recognized School of Dentistry, during which time special attention shall have been given to the specialty sought and subjects allied thereto.

3. Where a person applying to practise a specialty can show intensive study after graduation in a specialist's clinic or hospital service, due consideration shall be given with respect to the length of time required in general practice under Section 2 above.

4. When considering applications however of persons who were licensed to practise in the Province of Alberta prior to the passage of this Act due consideration shall be given to the length of time of such practice and the experience obtained in the specialty for which a license is sought.

5. It is further recommended that a special committee of the Senate, to be known as The Committee on Specialists' Credentials, consisting of the following persons, be appointed to administer these regulations; the Dean of the Faculty of Medicine, the Head of the Department of Pathology, the Head of the Department or School of Dentistry, Senior Instructor in Periodontia, Senior Instructor in Orthodontia, Senior Instructor in Prosthetic Dentistry, Registrar of the Alberta Dental Association, and such other members of the profession of Dentistry in the Province as may be appointed from time to time by the Senate on the nomination of the President of the University, providing however that any decision arrived at by this committee shall be subject to the confirmation of the Senate of the University of Alberta.

REGULATIONS OF ALBERTA DENTAL ASSOCIATION

Edmonton, Monday, July 4th, 1927.

His Honour the Lieutenant Governor, by and with the advice of the Executive Council, has been pleased to order (under Section 12 of The Dental Association Act) that the following Regulations Nos. (1) and (5), both inclusive, made by the Board of Directors of the Alberta Dental Association at their regular meeting held on July 5th, 1926, be and are hereby approved:

REGULATIONS

- (1) No member of the Alberta Dental Association shall practise dentistry in partnership with, or as the servant, agent, assistant, or employee of any person who is not a member of the said Association, nor employ any such person as servant, agent or assistant to practise dentistry.
- (2) No member of the Alberta Dental Association shall directly or indirectly publish or cause to be published in any manner whatsoever, any written or printed statement, in any form, containing statements as to the skill of such member or of any other member or members of the Dental Association, nor in such printed statement draw any comparison between the skill of such member and any other member or members of the Dental Association.
- (3) No member of the Alberta Dental Association shall directly or indirectly advertise in any manner whatsoever to the effect that he practises dentistry without pain.
- (4) No member of the Alberta Dental Association shall directly or indirectly advertise in such a way as to deceive or mislead the public as to the method he employs, or the means he uses in the practise of dentistry.
- (5) No member of the Alberta Dental Association shall directly or indirectly by means of any form of notice to the public, hold himself out as willing to give any professional service free of charge, nor draw any comparison between the fee or prices he charges and those charged by any other member or members of the Association; nor hold out any guarantee or promise of a guarantee in respect to either his work or materials.

John D. Hunt,

Clerk of the Executive Council.

I may add that our Board was successful in having these by-laws and regulations passed by Order in Council and signed by the Lieut. Governor. These were published in the Alberta Gazette of Friday, July 15th, 1927,

L. M.

American Dental Association, Detroit, October 24th to 28th

Most Canadian dentists who live any distance from Detroit have made up their minds whether they will attend the meeting or not by this time and are now chiefly interested in registration, transportation and accommodation while in Detroit. All these matters are made easy by the several committees having them in charge, but those who go must follow the directions explicitly in order to avoid disappointments, worry and loss of time and money. By an arrangement between Canadian and American Dental Associations, foreign dentists can register by the presentation of their home registration card.

Failing this, they will be charged the full fee, which will be returned to the home Association where membership may be accepted.

In order to get a reduced railway return rate, which will be half single fare, the applicant must get an identification certificate from Dr. D. C. Bacon, 31 North State St., Chicago. See August issue of the Dominion Dental Journal, page 254. The applicant must send his local membership card to Dr. Bacon to get the identification certificate. With this certificate the applicant is permitted to buy a return ticket for one and one-half fare. The return ticket must be stamped by the Association officers in Detroit.

From the list of Hotels attached suitable accommodation may be secured. Canadians might find it convenient to stay in Windsor at the Prince George Hotel.

HOTEL—ROOM—RATES—DETROIT

HOTEL	Rooms	WITH BATH		WITHOUT BATH	
		One Person	Two Persons	One Person	Two Persons
Book-Cadillac.....	1200	\$4.00	\$6.00		
Mich. & Wash. Blvd.....					
Statler.....	1000	3.00	5.00		
Grand Circus Park					
Tuller.....	800	2.50	5.00		
Grand Circus Park					
Savoy.....	750	2.50	4.00		
Woodward at Adelaide					
Detroit-Leland.....	700	3.00	5.00		
Cass & Bagley					
Barlum.....	810	2.50	4.00		
Cadillac Square & Bates					
Fort Shelby.....	393	3.00	4.50	\$2.50	\$3.50
Lafayette & First					
Fort Wayne.....	300	2.50	3.50		
Cass & Temple					
Imperial.....	170	3.00	5.00		
26 Peterboro					
Madison-Lennox.....	300	2.50	4.00	2.00	3.00
Madison Ave.					
Norton.....	250	2.75	4.50	2.00	3.50
Jefferson & Griswold					
Palmetto.....	324	3.50	5.00		
John R. & Hancock					
Prince Edward.....	250	3.00	6.00		
Windsor, Ont., Canada					
Royal Palm.....	180	3.50	5.00		
2305 Park Ave.					
Stevenson.....	207	2.50	4.00		
46 Davenport					
Webster Hall (Bachelor)					
111 Putnam				2.00	4.00
Wolverine.....	500	2.50	5.00		
Witherell & Elizabeth					
Fairbairn.....	450	2.50	4.00	1.50	3.00
Columbia & John R.					
Park Avenue.....	250	3.50	5.00		
Park & Sproat					
Paul Revere.....	360	2.50	3.50	2.00	3.00
67 Sproat					
Plaza.....	100	2.50	3.50		
166 Madison					
Wardell Apts.....					
15 E. Kirby Ave.					

165 apts. \$65.00 per month and up.

Notes

Dr. Carlton Bliss has opened a dental office at 180 Bloor St. West, Toronto, confining his practice to orthodontia.

Life has no blessing like a prudent friend.

We note with regret the passing of Dr. John S. Somers, Toronto. Dr. Somers was born in Bowmanville, Ont., and practised his profession in Toronto for almost thirty years. He is survived by his wife and three children.

A London dentist is reported as using the dental engine for carving bronze in sculpture.

The report of the Carnegie Foundation on dental education appeals in a very different manner to the various newspaper editors who undertake to make remarks on the subject. For instance, the *London Free Press* says it is an attempt to place the dentist on the same intellectual plane as the physician. This is to be accomplished by adding a year of literary college for one of dentistry.

Dr. Ernest Arthur Higley, of Chatham, Ontario, died in Harper Hospital, Detroit, following a mastoid operation August 3rd, 1927. Dr. Higley graduated 1911, and after practising three years in Blenheim, he moved to Chatham.

Here are some reasons given why parents do not wish their children to have proffered dental treatment:

"His father has had toothache all his life, so the child will have to put up with it."

Other reasons given by parents include:

"Bad teeth run in the family."

"He won't go, and I can't make him."

"What was our teeth given us but to eat with, and you want to draw them."

"I'll take her to a proper dentist when her teeth ache."

"Shock was so great in another child that it brought on scarlet fever."

"Is the child mine or the London County Council's?"

A building is now being erected in Montreal especially for dentists.

Dr. S. Straus was given judgment for \$60 in an action against S. Clapham.

The Junior Red Cross supplied money to equip and maintain seventy-three travelling dental clinics in the Philippines.

The accidental removal of a tooth is not a cause for non-payment of a dental bill in the opinion of Judge Morson.

Dr. G. Aldred Pollard, Vancouver, was drowned in English Bay June 7th, 1927. Dr. Pollard was born at Orono, Ontario.

Dr. Luman Waugh, a former Canadian, now on the staff of Columbia University, is a frequent visitor to Hudson Bay to study the condition of the teeth of the Eskimos.

Dr. Lewis Hall, Victoria, B.C., who began practice in 1888, has sold out to Dr. W. J. Gibson. Dr. Hall has the distinction of not having lost an election to any office he became a candidate for in a period of many years. He held many municipal offices from al-

derman to mayor, as well as being a member of the school board.

There is no heart disease which is not congenital and is not due to infection. *Sir Berkeley Moynham.*

Dr. William Hunter at a recent meeting of the British Medical Association in Edinburgh made the following remarks on the relation of infection to insanity:

He declared that a large proportion of the insanity in Great Britain among the 133,000 inmates of asylums was due to the poisoning of the brain chiefly by bad teeth.

He urged that all public authorities issue an order that every mental hos-

pital under their charge should have a fully equipped dental department, with a resident dental surgeon, as well as nose, throat and ear specialists.

Dr. Hunter paid a tribute to, and told a remarkable story of the pioneer work in this field of Dr. Cotton, Director of the New Jersey Hospital.

Dr. Fred Mallory, of London, England, a former Canadian, donated a silver cup for handicap men over 20. It was won by Dr. Leon Fluck. The runner-up was Dr. Millett, of Dartmouth, who carried off one dozen golf balls donated by the Lavis Chemical Company, of Montreal.

Dangers of Monoxide Gas

The number of deaths from monoxide gas is increasing so rapidly that some authoritative warning should be included in public health reports.

The extreme danger of this gas has long been known; but it is not always realized that quite a low percentage of it in the atmosphere may prove fatal. It is one of the products of the combustion of petrol hence the danger of running the engine of a car in a closed garage. Many deaths have been caused in this way; and motor-

ists should realize that it is only safe to start up their engine in the garage if ample ventilation has been provided by the doors being thrown wide open. Professor Henderson of Yale University, in one of the lectures which he delivered in London last year, expressed his opinion that the number of motor cars in the London streets might conceivably bring the concentration of carbon monoxide in the atmosphere near to the danger limit.—“Dental Surgeon”, London.

CORRESPONDENCE

Collingwood, Ontario.

May 11, 1927.

Dr. A. E. Webster,
Toronto.

Editor of Dominion Dental Journal.
Dear Doctor:

I have been reading in several magazines recently the charitable work done by the dentists in various communities throughout Ontario, not forgetting to mention the "Ontario Health Day" which seemed to be nothing much more than good advertising. I must say that in the publications to hand I did not see any organized work being done in any community. Accordingly I thought what the dentists have done in this town might be worth publishing.

Nine months ago the dental profession of Collingwood agreed to do the work of all the children under sixteen years of age, whose parents were not financially able to pay. Our school nurse is supplied with Dental Inspection Cards, these she signs and gives to the children requiring dental services. Upon presentation of the cards to the dentist, the child's dental work is cared for. When it is completed, the dentist signs the card, which is returned to the nurse for filing purposes.

As far as we know the work has been completed. None of us feel financially poorer, but we do feel that

we have done a worthy and charitable act for the children of those unable to pay.

Trusting this may be an incentive to dentists in other communities to do likewise.

J. M. Mitchell.

Editor "Dominion Dental Journal",
Toronto.

Sir:

Your item on page 194, "Dominion Dental Journal" for June, stating that Albert Minott in Hamilton was fined \$100.00 for taking an impression of a mouth and "the magistrate held that if he had merely repaired a denture it would not be practising dentistry,"—means that the dental profession will have to contest in court the right of a dental mechanic to repair dentures for the public direct.

Some laboratories will no doubt, on legal advice, insert large advertisements in the press, to induce the public to come to them. What has been done in the dark will become legal. Will they then be practising dentistry if they fit the repaired denture to the mouth?

Conditions seem bad enough in the dental profession without the court finding of some magistrate making things worse.

Yours truly,
Harold D. Morris.

OBITUARY

It is with the greatest regret that we have to announce the sudden death of Dr. A. E. Henniger of Calgary. Dr. Henniger has conducted his practice in Calgary for quite a number of years, the later ones being given to the specialty of extraction. For this work he had prepared himself by taking Dr. Winter's course.

Dr. Henniger served many years as a member of the Board of Directors of Alberta Dental Association, occupying the offices of both Secretary and President at different times, in which capacities he gave good service to his profession. As a dentist he was a conscientious operator; as a fellow practitioner his genial smile and quiet friendly personality will be sorely missed, while his position on the Board will be difficult to fill. Our sincerest sympathies are with Mrs. Henniger.

Dr. Schwartz was drowned in Lake Erie August 15th, 1927. Dr. Schwartz

was born in Braila, Rumania, in 1888, but came to Toronto in 1902 and was a graduate of the University of Toronto, where he received the degree of doctor of dentistry in 1911.

He was the second Jewish doctor to graduate from the Royal Dental College and was a member of Mount Sinai Masonic Lodge, a member of the National Council of the Zionist organization of Canada and honorary secretary of the Central Division of Ontario Zionists.

Dr. Schwartz went to Palestine as a member of the Hadassah Medical Unit and did splendid work in Tiberius and Sappho. He is survived by his parents and three sisters, Mrs. S. Rycus, Mrs. A. Selick and Mrs. C. Kimmellan.

Dr. Z. I. Grono, New Waterford, Nova Scotia, died August 9th, 1927. Dr. Grono was a recent graduate of Dalhousie University.

Dr. C. N. Johnson Writing of Dr. Brophy

When he began his work he was obliged for the most part to chart his own course. Oral surgery, and particularly cleft palate work, was more or less in its infancy and a new path had to be beaten.

Dedicated to the relief of his suffering fellow-men he, at the very beginning of his career, stepped boldly out into the arena where theories are tested in the alembic of practical experience, and he has never been compelled to recede from that first step. While much of his work was pioneer, he has always been careful of his

ground, and the result is that he is to-day a world-wide authority on his chosen specialty. The sum total of what he has achieved for his age and generation in the correction of one of the most conspicuous and distressing deformities of human kind can never be computed, but if the lisping tongues of babes could add their tribute to the chorus of hundreds of fathers and mothers throughout this and other lands, it would swell an anthem that would reach around the world. He who brings hope and happiness into a home clouded with despair; who by

9 Ways

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- 3 Salivary flow: markedly increased by the mild acidity of the paste, hence better tooth protection.
- 4 Mildly acid: yet many tests show it harmless to enamel.
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the genius of his art transforms a hideous wreck of humanity into a thing of grace and beauty; who makes the dumb to speak and the sad to smile; who waves his magic wand across the countenance of deformed and helpless childhood and works a miracle of regeneration—this man is greater than potentate or prince; better than he who claims the plaudits of the crowd, or who marches triumphantly at the head of a legion of warriors. To save humanity is better than to achieve glory, to do good

is better than to be renowned.

And in the quiet annals of the hearthstone and the home, where human hearts are mingled in the myriad lights and shades of hope and cheer, where the evening embers beam on the faces around the family fire-side and reflect the happy smiles of parents and little children—there the name of Truman W. Brophy will be lisped on the tongues of prattling babes long after many of the so-called great of earth have passed to oblivion and forgotten dust.—*The Bur.*

Indiscriminate Tooth Extraction

PROF. BARKER, JOHNS HOPKINS.

This brings me to the question of what ought today to be regarded as justification for the removal of a tooth from the standpoint of the dangers of focal infection. Just here I know that I am treading upon somewhat dangerous ground, first, because of the violent polemic now in evidence among members of the dental profession with regard to this very subject, and second, because it may be argued that this is a matter wholly for dentists to decide and one with which medical practitioners should not concern themselves.

As regards the latter point, I may say that it is, in my opinion, the duty of every medical practitioner to consider the welfare of his patient as a whole, and if he has reason to believe that gingival or periodontal states are of importance for his patient's health, he has a perfect right to attempt to influence his patient in the direction that he believes to be for that patient's good. In general, however, I believe that those of us who practise medicine must depend upon you who practise dentistry for decisions as to whether or not a patient can with safety retain a tooth that is suspected.

Nevertheless, the observations of the attending physician regarding the constitutional disposition of his patient and the state of his body as a whole can, in doubtful cases, often be of value to the dentist in arriving at decisions as to tooth removal or tooth retention. For if a patient shows signs of arthritis, myositis, neuritis, iritis, anemia or some other condition that is known sometimes to follow upon focal infection, and if no definite focal infection can be demonstrated anywhere in the body other than in a tooth that is suspected, the physician would have the right to suggest to the dentist that it might be wise to be radical rather than conservative with regard to the doubtful tooth. Whereas, on the other hand, in another case, the physician's report to the dentist, that his patient was free from definite signs both of metastatic infection and of chronic intoxication, might lead the dentist to allow the patient to carry a doubtful tooth for a somewhat longer time than he would otherwise consent to.

Into the extraordinary controversy now going on within the dental profession itself as to whether prac-



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tically all pulpless teeth shall be removed or whether those of them that yield no clinical or roentgenological evidence of local disease other than a dead pulp may justifiably be retained, I ought perhaps not to enter. But, after careful thought, I believe I shall not be rash if I state to you frankly the impression I have gained from a perusal of the arguments advanced by the participants.

I am not a dentist, nor have I had any training whatever in the technique of dentistry. But my work in medicine has compelled me to learn something about infections and intoxications and about the sciences of pathology, bacteriology and immunology. Also, as an avid reader of medical literature and with the experience of a good many years of weighing evidence, I may perhaps lay claim to at least average power in the evaluation of the merits of writings upon medical topics, in estimating the limits of error in technical diagnostic methods, and in judging of the logicity or illogicity of the interpretation of medical data.

Without venturing any opinion as to the ultimate outcome of the controversy that is now so acute (since it deals with a problem regarding which, it seems to me, much more knowledge than is at present available will be necessary for final conclusions), I may say that the arguments of those who advise the removal of at least 75 per cent. of all pulpless teeth, whether or not clinical or roentgenological evidence that their retention is doing injury to their owners exists, do not seem to me to be convincing.

Though time will not permit me to discuss fully the reasons for this lack of conviction, I shall with your permission refer to a few points that seem to me of real importance. In the first place, the mere presence of bacteria in a pulpless tooth, or in the tissues about it, cannot be regarded as sufficient evidence that the body

is being injured by such bacteria or even menaced by them. If you will recall that the skin and the mucous membranes of the mouth, the nose, the paranasal sinuses, the tonsils, pharynx, the respiratory tract and the gastro-intestinal tract always contain bacteria, pathogenic as well as saprophytic in type, you may perhaps be somewhat less afraid of bacteria in the gums and in pulpless teeth.

In the second place, the fact that the bacteria from such a pulpless tooth, when injected beneath the skin of a rabbit, may sometimes do harm to the animal, affords no proof whatever that the retention of that tooth in its normal position in a patient's mouth had been doing him any harm. To adduce such evidence in favor of pulpless tooth removal would be to reason from false analogy.

In the third place, the importance of certain studies of the blood, for the light that they throw upon the problems under discussion has, in my opinion, been over-estimated. Thus the bringing of the proof that the content of the calcium (total or ionic) in the blood of a patient carrying a pulpless tooth deviates from the average calcium content of the blood, would not seem to me to justify the conclusion that the change in the calcium was due to the presence of the pulpless tooth, nor the conclusion that the general resistance of the body to bacterial infection was necessarily lowered.

The same may be said of the finding of a relative increase in the lymphocytes of the blood (with corresponding reduction of the polymorphonuclear white cells) in a patient who carries a pulpless tooth. We know as yet too little regarding the significance of relative lymphocytosis and of relative hypoleukia to permit of dogmatic assertions regarding either the existence of focal infection or the reduction of natural resistance to infection.

Dominion Dental Journal

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TORONTO, OCTOBER, 1927

No. 10

ORIGINAL COMMUNICATIONS

Factors Which Determine the Longevity of a Human Denture

A. E. Webster, D.D.S., M.D., M.D.S., F.A.C.D.

(Read before the Montreal Dental Society)

DENTAL ORGANIZATION

Operative Dentistry is generally understood to include all those procedures in dental practice which have for their object the preservation of the natural teeth in a state of health and usefulness. There are those who would take from the department of operative dentistry, pediadontia, peridontia, pulp management and treatment, the root canal problem, inlay construction, oral hygiene, oral prophylaxis, and therapeutics, leaving the operative dentist only the mechanics of inserting gold foil, amalgam and silicates. Each of the former is now practised by a pseudo specialist, hence the keen desire to get these subjects separated from the general practice of dentistry.

While it must be admitted that some very definite advantages have come to both medicine and dentistry by specialization, yet in general, it is to the disadvantage of dentistry and to the public to have such a calling so finely divided. On the whole no patient,

either medical or dental, gets the best services, who depends on specialists for his health guidance. It is impossible for one speciality to join up to another without overlapping, or leaving a hiatus. Some one person should take charge of and be responsible for the dental advice and treatment of every patient.

There is the same need for the family dentist as there is for the family physician, and the operative dentist more nearly corresponds to the family physician than any other specialist in dentistry. In fact there is a greater need for the family dentist since anyone can learn to take X-Ray pictures in two weeks' course and in another week learn to diagnose rheumatism, cancer and pernicious anaemia, or with an electric light diagnose focal infections and then find *oral surgeons* who are willing to extract teeth on such a diagnosis. The family dentist has been stamped by the wolves round about him. This horde of

specialists has crowded about him until he daren't say his soul is his own, so in self-defense, he turns specialist too. The practice of operative dentistry, as defined in the opening paragraph, is not too extensive to be encompassed by any normal human mind. The evidence of this is, the fact that very few, if any, of the specialists we know of confine their whole time to the subjects which they talk and write about. There is very little use in our agreeing that the public should receive the services of good general practitioners, while our dental colleges divide their infirmaries into from three to eight compartments, each headed by a practitioner who allows the impression to get abroad among the students, that his subject can only be practised by specialists, and that students cannot expect to be competent, in such a speciality, from a college course alone.

It must be conceded that dental patients or the public generally are better served by someone who has a good, sound grasp of the whole subject, and feels a responsibility for the patient's dental care, than by ever so many specialists each only feeling a responsibility for a part. "Too many cooks spoil the broth." "What is everybody's business is nobody's." "No part of the human anatomy can be interfered with, without influencing all other parts." So someone must take the broad view and who is more competent to do it, judged by his training, experience and practice, than the operative dentist. He is the family dentist. It is he who must take into consideration all the factors which go to build up a human denture and maintain it in a state of health and usefulness. He must be the student of heredity, embryology, biology, anatomy, physiology, and physics, so that he may be able to predict the future of a denture and what it will be forty years hence. If he can foretell the dental future of a patient, then he will be the better able to combat evil tendencies. "To be forewarned is to be forearmed."

HEREDITY

In view of having placed the operative dentist, as the family dentist, the general dentist, the consultant, the dental diagnostician, let's see what his responsibilities are and what preparation he has had to meet these responsibilities. His duties are to build and maintain the teeth and mouth in health and usefulness. Like any good builder, he looks to the foundation first. The chief factor in this is selective mating. There are more teeth lost, in my opinion, by poor dental heredity, than by poor dental environment. "Like begets like." "Figs are not gathered from thorns, nor grapes from thistles," nor was Man O' War bred from a Clydesdale. I know a dentist, a member of a family of three generations each with thirty-two sound teeth. Was this an accident? Not at all, no more than that black foxes should breed black foxes or that red foxes should breed red foxes. Should the dentist then start out as a propagandist to instruct the public on mating. There would be as much reason for it as a diet campaign but I doubt the wisdom of either, except as laymen. It is true that defective bones and teeth can be produced by bad diet; like any layman the dentist should ally himself with those who are working for the public good. It is all right for him to talk in generalities, or on general principles, but as soon as he prescribes a particular man as a husband for Miss Brown or certain definite foods for Mrs. Jones' baby, then he is practising medicine and taking on a responsibility for which he has not had sufficient special training. As an educated layman, the dentist might well suggest properly prepared literature on both mating and feeding of expectant mothers and young children.

It is certainly within the dentist's right to do everything possible to promote good health and point out to the public generally, and physicians in particular, that prenatal diet has much to do with the future denture,

especially the deciduous teeth. Dentists should impress the family physician with the fact that it is the diet the child takes during the period of the development of the teeth which influences their structure and arrangement. Both Howe and Mellanby have shown marked influences of structure over short periods of time by bad diet. If this be true, then it is about time dentists should stop talking about dietetic prenatal influences on the permanent teeth, since these practically all calcify after birth. True, the better the condition of the child at birth, the better it will develop in the immediate years to come. It is a significant fact, from a dietetic viewpoint, that most visible defects in the teeth occur in the centrals, cuspids and first molars which calcify during the first year and early second year of life. In other words, defective teeth develop during the child's early digestive struggle, caused by poor mother's milk and bad artificial diet. The teeth which develop after he can masticate are rarely visibly defective.

No dentist has practised for fifteen or twenty years in one location without having three, and sometimes, four generations of the same family under his care. He can within certain limits predict just what is going to happen to almost every tooth. In general, he knows what each child's teeth will be like when twelve, twenty or forty years of age, just as the psychiatrist knows what mental twists will come to children of bad mental family history. In some families dental caries does not occur to any marked extent at any time, while in others decay never ceases until every vestige of tooth tissue is lost. Again others have decay of deciduous teeth only, or decay may become worse at puberty, and rarely at middle life. It is hardly possible that such periodicity of decay as is evidenced in many families can be accidental or environmental. It surely must be an inherited peculiarity. Knowing such peculiarities concerning

dental caries, in a family, is a guide to the care and treatment of such patient's teeth.

However, much is written and studied about the local causes of irregularities of the teeth. Every observing dentist has seen scores of teeth in the same families exhibiting the same forms of irregularity. Can these be accidents? Children in the same family usually develop the same forms of vicious habits which cause irregularity. The writer once saw in his clinic, three generations of impacted upper left cuspids at the same time, and a history of one other. Unfortunately, no history was taken of the balance of the family. If like begets like, then the family dentist, being the first on the ground, should foresee irregularities long before they appear to the casual observer or even the specialist.

No matter what is said about the causes of periodontal disease, whether they are local or general, there is a notion in every dentist's mind that a patient giving a family history of periodontoclasia will himself have the disease. Some years ago a young girl patient of mine was going to spend the summer on a ranch in Western Canada. I advised her to visit a dentist in a neighboring village if anything went wrong, with a temporary filling just inserted. When she returned she told me she visited a dentist who was much interested in her beautiful teeth, but especially the gums. He told her her teeth would all loosen and be lost before she was forty years of age. I must confess I smiled at the opinion of my confrere, but the case interested me enough to get the family history. Father and mother had lost all their teeth from periodontal disease by fifty years of age. Her two brothers later became patients in my practice and under my guiding hand lost many teeth before reaching thirty years of age. One brother died of endocarditis. The other in the War. At the present time the girl in question, at about thirty-eight, has lost many

teeth in spite of expert periodontal care. Again we ask, was it an accident that this young woman had periodontal disease? And was it not keen insight on the part of the dentist to foresee it? The diagnosis was early and the treatment helped much to retain the teeth.

There is a type of unclean mouth, with a gummy, sticky, tenacious, abundant saliva, with irritable mucous membranes which is found in certain families, and to some extent must be environmental because it will clear up under local treatment but its tendency to recur makes one suspicious of its having some hereditary characteristics. An early diagnosis of oral sepsis of which the above is the beginning, falls upon the operative dentist.

Up to the present time, there have not been any dental family history charts recorded. Dentistry has not recorded the histories of even individual dentures, not to mention the histories of the dentures of whole families. In government we have the histories of the Royal families of Europe. In finance the histories of the Rothschilds. In criminology the histories of the Dukes. In literature the history of the Arnolds. In dentistry, no histories. We have little or no data upon which to draw conclusions.

Acquired defects and deformities are not transmitted from parent to offspring. However, reasonable as this would seem to some, and no matter what the arguments in favor of conveying acquired characteristics to the offspring, it has not yet been demonstrated to the satisfaction of scientists that it can be done. Lamb's tails have been cut off for thousands of generations, and yet when allowed to grow they are as long today as ever they were. So it is not the Cameron lamp and the Ray that causes the failure to erupt third molars, lateral incisors and lower second bicuspids. It is not because these teeth have been

frequently extracted that the children of such people do not develop them.

ENVIRONMENT

Although heredity plays a large part in the causation of dental disease and must be considered in the determination of dental advice and treatment, yet the rapid increase of dental defects and disease leads one to think that environment has much to do with the present day dental disorders. Undoubtedly diet influences the structure and arrangement of the human denture. Whether tooth decay is of local or general origin it remains largely a matter of environment and as such must be treated.

What was at one time a very prominent part of a dentist's and physician's education is now little spoken of: diseases of dentition. While children may have disturbances of the nervous system during the eruption of their teeth, neither the dentist nor the physician look upon them with much concern, nor are there many cases of severe oral infections to be found in modern practice. What seems, however, to be on the increase is a complete denudation of enamel. This seems to be more like a solution rather than simple dental caries. It especially attacks the anterior teeth. The pulps are involved even at two to three years of age. In the majority of such cases it is impossible to give any kind of conservative treatment. Such children often seem plump but are usually anaemic and restless. A decision must be made whether it is better to remove all the infected teeth, and take the chances of the consequent irregularities and loss of power of mastication, or leave them in position with all their chances for causing pain, local infection and general disease. Such a decision should only be made after a study of the family history, personal history, and a consultation with the family physician. It is rarely an error to get rid of infected teeth in young children.

The only teeth with non-vital pulps

that might be retained are the second molars and the cuspids.

It may be taken for granted that just as soon as young children's teeth become discolored and food collects about them so as to need brushing, just that soon, something has gone wrong with the diet. The next thing to look for is dental caries or periodontal disease.

The dentist's treatment for decay of deciduous teeth is disks and wheel stones, nitrate of silver, copper cement and copper amalgam and White cement.

Oral sepsis develops early in decayed and diseased deciduous teeth. Oral prophylaxis should therefore be practised to help out the general methods of attacking this condition.

DEFECTS AND DEFORMITIES

There are two important observations to be made on the deciduous teeth which have much to do with the future of the permanent denture: the closure of the bite from wear and the consequent overbite and the retention of the four second molars in proper relation as supports for the coming first permanent molars. The spacing of the deciduous incisors to make room for the second teeth is an indication of the future denture. Deciduous teeth which do not absorb physiologically often glide the permanent teeth into improper locations. Every erupting tooth should be watched, and if need be, directed to its place in the arch.

It is indeed a wise dentist who knows when to leave Nature to her processes and when to interfere. It is here where a wide knowledge and broad observation together with a minute study of the family history will dictate the safest practice.

More can be done for the longevity of a denture during the first ten years of life than in any other three decades. By then most inherited characteristics, defects, deformities and habits will have shown themselves, as well as the

tendencies to tooth decay and periodontal disease.

It must be admitted that the first permanent molars are in bad company during the first four or five years of their lives. Few of them have a sufficient coat of armor to protect themselves from their neighbors. The occlusal surfaces are usually defective and some authorities go as far as to recommend the complete removal of these defects and irregular surface as soon as the teeth erupt. This is surely heroic treatment for a child of six or seven. All things considered, it would seem wiser practice to use nitrate of silver on such defects, grind out deep crevices, apply nitrate of silver and squeeze copper cement into the occlusal surfaces. If decay has begun, still it is doubtful if all the fissures, defects and grooves should be cut out and included in the cavity for young children. Nitrate of silver and copper amalgam will protect such teeth until more permanent operations can be done.

If the pulp of a first permanent molar must be lost before the physiological closure of the apex, the sooner the tooth is extracted the better, provided the jaws can be maintained at a normal distance apart.

EXTRACTION OF FIRST PERMANENT MOLARS

If the deciduous teeth are in place and will hold the jaws in normal separation and the second molars have not yet erupted and two lower first molars and one upper first molar must be extracted, then remove all four, but if two uppers are to be lost, do not extract the lowers. If two molars on the same side must be extracted, do not extract the first molars on the opposite side, but if a molar on the lower left side must be lost and the one on the upper right side, extract all four. If the only teeth in the mouth keeping the bite open are first molars, retain them until the bicuspid or the second molars come into normal

position, then determine whether to extract or not.

With such treatment, second molars will come forward and align themselves beside the bicuspid without tipping and there will be no increase of the overbite of the uppers.

ACCIDENTS—POOR DENTAL ADVICE

Accidents to children's teeth are often very badly treated and in consequence of which the whole denture suffers. The four chief causes of fractures and dislocations of children's anterior teeth are icy walks, hockey, lacrosse and the porcelain drinking fountain. Every tooth which has had a heavy blow upon it, whether fractured or not, should be kept under observation, lest the pulp should die and develop an acute inflammatory process which would endanger the future of the periodontal membrane. There should be no attempt to make so-called permanent fillings until sufficient time has elapsed to be assured of the condition of the pulp. If the pulp dies from concussion or from exposure and surgical removal before the physiological closure of the apex, there is little hope of saving the tooth. If only the enamel is involved, polish the surface and if the dentine is involved, stick cement to the fractured surface or use a celluloid cap and wait. There is more bad advice and bad practice to be found in this department of dentistry than in any other, chiefly because those who have written on the subject have not lived where fractured teeth in boys is as frequent as dental caries itself.

Permit a record of one case over a period of about twenty years. A young medical student in a lacrosse game had his lower central incisor fractured, not involving the pulp. His dental student friend advised a gold filling. In a short while the pulp died and the tooth became discolored. An artificial crown was inserted; some time later, an acute alveolar abscess developed and the crown and root were removed.

A bridge was made, using the central and lateral as abutments; these developed periodontal trouble and were lost. The next bridge went from cuspid to cuspid. This being unhygienic and having lost a molar or two, a partial denture carried him along in discomfort until his death a year or two ago. This doubtless is the story of scores of simple fractures of incisor teeth not involving the pulp.

GREATEST DESTROYER OF THE HUMAN DENTURE

Pulp involvement stands out as the greatest destroyer of the human denture in early life. These involvements are of two main origins, traumatic and carious. The final result is infection. It is gradually coming to light that the dental pulp is just as liable to infection and degeneration, whether the tooth is decayed or not, as any other part of the body. There has been a false security behind vital pulps. For some years we have been suspecting the pulps of all carious teeth of infection and degeneration and especially those markedly receded, or with calcific deposits, but recent examinations of perfectly sound teeth in sick patients have shown organisms in vital pulps. If these statements turn out to be facts, then there must be a stern right about face in our attitude toward pulp management and root canal therapy. We have been led to have entirely too much confidence in our dental surgical technique and not enough in Nature's restorative processes. Such statements as "hermetically sealing root canals," "capping pulps so that they cannot die" and "putting night caps over root ends of teeth which will forever prevent infection" will have to be revised.

There is a good deal more involved in protecting and capping pulps than to apply some inert or disinfecting substance to the tooth structure. There is not only a recognition of the anatomical and mechanical conditions present but also the general physiological and pathological processes of the

human organism. Dentists will have to learn that most difficult of all lessons *humility*, in the presence of the Creator's purposes. In the words of that great statesman, Abraham Lincoln: "It is not a question of the Lord being on our side but of our being on the Lord's side." This great truth must be taken home by dentistry, but must not detract from, nor interfere with the development of technical skill.

Before a pulp capping is undertaken, such broad principles must be thought of as heredity, personal history, anatomical form, environment, dental history, present complaint, symptoms, diagnosis and prognosis. With these thoughts in mind the operation is begun.

The great bugbear of the profession today is the tooth with the non-vital pulp and will always remain so, so long as we continue to put our trust in X-Ray pictures and mechanical root canal fillings. We have been stampeded and humbugged by over-confident and over-zealous salesmen who in turn got their education from the mechanical dentist and not from the biological dentist. It is a marvel how dentists have been brought to believe that they can mechanically fill all root canals of teeth and *if it were done* that no possible mishap could ever befall the tooth. The success of a root canal filling is only in proportion to its mechanical perfection when many other more important factors have been complied with. I am not so sure that the X-Ray picture has not destroyed more useful teeth than it has saved.

A close study of the anatomy of the root ends of teeth in vital and non-vital pulps with the aid of diagnostic wires and the X-Ray will disclose the fact that all root canals cannot be best filled with the same substance no more than all houses can be best built with the same material. The properties of root filling materials must be adapted to the conditions present. There is

no one best material for all cases.

The prognosis of a tooth with a non-vital pulp depends upon the physical condition of the patient and the condition of the periodontal membrane. The condition of the periodontal membrane depends largely upon the age at which the pulp died and the length of time it is dead, the history of acute inflammatory processes, oral hygiene, and the forces disturbing the membrane.

The reduction of the longevity of a denture is not in direct proportion to the number of teeth lost. There are certain key teeth which, by the way, are not the same at all ages, that when lost disturb the denture more than others. The first molar in the lower jaw is more of a key tooth than the first molar in the upper jaw. The loss of the first molars at fifteen is more disturbing to the denture than their loss at eleven. Thus the future of a denture must be studied not by how many teeth are lost, but by what teeth and when they are lost.

SENILITY

Patients who are getting on to middle life and who are active mentally, often ask the dentist how it is their teeth are becoming discolored, much worn, some of them loose, sore to bite on and generally inefficient, while they feel not a day older than twenty years ago. They forget many other evidences of advancing years besides their teeth. The hair, the skin, the stiff muscles after exercise, the late nights and the two-step they used to enjoy.

The chief evidences of senility are to be found in color and wear, drifting teeth and periodontal disease. It may be truthfully said of humans as of horses, that the teeth tell the age.

USE AND WEAR

Some enamels and dentines, especially of the deciduous teeth, wear until half of the substance of the teeth is lost. A peculiar thing about some of this wear is the cupping of

the occlusal surface. It would seem that as soon as the enamel is worn through, the dentine hollows out, though it does not come in contact with an antagonizing tooth. An erosion rather than an attrition or abrasion. These cuppings are often so deep that fruit seeds and other foods wedge into them splitting the surrounding enamel. Judicious grinding of the enamel, in such cases, will avoid large plates of enamel being split off. It is not at all uncommon to see the teeth of old people worn to the gum line, especially is this the case in the anterior part of the mouth, if the molars have been lost.

The effect of occlusal wear, if in marked degree, is to bring the upper and lower jaws closer together with the consequent change in the condyle path. With the closure of the jaws there is a protrusion of the lower. If the molars and bicuspid have been lost, an edge to edge bite developed which usually brings about a rapid anterior wear with more or less cupping. In some cases the upper anterior teeth are protruded and worn chiefly on the lingual aspects. Teeth which once antagonized normally will sometimes develop a gliding wear which will place them in false positions while in other cases, the wear will be such as to lock the bite, giving the patient no possibility of lateral movement while the teeth are in apposition. Single teeth often begin to change position without any apparent perioclasia, such cases often have their origin in occlusal wear. Such mal-occlusions as are developed from occlusal wear might be classified as traumatic occlusions and undoubtedly have a baneful influence on the periodontal membrane. Having recognized the condition and its prognosis if untreated, the dentists' duty is clear. Restore the teeth and occlusion to the normal for this patient, keeping in mind that which is normal for one patient is not nor-

mal for all others. One should not be afraid to use carbon paper and the stone but leave all ground surfaces highly polished.

It would seem that the more rapid the occlusal wear, the more likelihood of the surfaces being sensitive to attrition. If acid fruits are indulged in, such exposed dentines become exceedingly sensitive. In cases of eburnation, however, no such sensitiveness develops from the use of acid fruits or to thermal changes. Pathological pulps are undoubtedly developed under worn teeth, as hyperaemic pulps, pulp stones, atrophic pulps and marked pulp recession are more likely to be met with, than in unworn teeth. If for no other reason than to save the development of pathological pulps, exposed dentine should be protected from irritation. One's observation should have told us that tooth tissues are exceedingly porous, but it remained for Bunting to demonstrate it. In future exposed dentines will get more attention than in the past.

The writer has observed that teeth which wear away badly rarely have dental caries and what is more, such dentines cut easily as if they were less dense. If for some reason, solution ceases, then there develops a hard glistening surface as if brought about by burnishing. This surface is often as hard as some enamels. It is called eburnation or tubular calcification.

The linguo-incisal surfaces of incisors wear away until the dentine is exposed, leaving a thin labial plate of enamel unsupported by dentine, which readily splits off leaving a saw edge to the enamel or in some cases so much splits off as to leave distinct notches. Such wearing and notching is more rapid if the molar teeth have been lost.

When teeth have been lost or there is marked mal-occlusion, there is often a gliding wear which cuts deeply into the tooth structure,

causing the recession of the pulp or its death, as well as periodontal irritation.

Dentists of experience and observation have recognized that natural tooth tissue wears away more rapidly than fillings, inlays, crowns, bridges, or artificial teeth, but how many have applied this knowledge so as to prevent the failure of former dental operations. As the teeth wear down, fillings, inlays, crowns and bridges receive more and more of the weight of occlusion. All have recognized, with pride, the glistening burnished spot on the lingual surface of an anterior filling or inlay, showing the heavy occlusion delivered upon this surface. We are proud of our former skill because the filling has not been dislodged though it receives unusual stress. The consequence of such impact, is certain to dislodge the filling, and perhaps, the corner of the teeth as well. If it should happen to be a crown, it is sure to bend the pin or split the root. Such points of weight of occlusion should be freed by grinding, from time to time, as necessity demands. This is a prophylactic measure. How we have watched that large pure gold inlay or amalgam filling being beaten by an antagonizing molar tooth as if it were intended to make gold foil of it. Sooner or later such fillings will fail. An amalgam so beaten will flow, if the filling doesn't fail, the periodontal membrane will.

SPLITTING OR FRACTURE

Another consequence of occlusal and proximal wear is the development of periclasia from wedging of food and traumatic occlusion. Since the introduction of the inlay process, there is no reason for not protecting against occlusal and proximal wear.

There is an approximate wear of the teeth which is little recognized and is always associated with marked occlusal wear. The individual

movement of the teeth is sufficient to wear distinct facets on the proximal surfaces, thus leaving flat contacts where there were once convex contacts. This reduces the mesiodistal diameter of the teeth and permits food to pass between them and makes the beginning of periclasia.

Having directed our attention in a very cursory manner to what occurs in time and wear of human teeth, let us now think of the effects of those changes. How should the knowledge of these things influence our practice? It is all very well for us to examine a young patient's mouth and recognize several small gold fillings in the proximal surfaces of the anterior teeth, and also a slight linguo-occlusal wear, but how many of us really begin to figure out what this means for the patient twenty-five or forty years hence? It is one thing to discover what is now happening but unless we are fully aware of the remote consequence of the present conditions, we are not likely to apply appropriate prophylactic measures.

The time was when dentists were most anxious to find a remedy for the symptoms presented by their patients while today many are keenly exercised about the cause of the symptoms or the diagnosis. This is good as far as it goes, but let us now look into the future a little further and study the remote consequence of a wearing down molar or a decay at the gingival of a second molar, at sixteen years of age. How unconcerned we are when a child of ten or twelve presents with a beginning caries in the upper lateral incisor. Let me remind you of the dental history of such a lateral incisor. A cement filling for two years. A silicate for perhaps three more, or perhaps a small gold filling for the same time, or perhaps five years more. Each succeeding filling getting larger and larger until the occlusion strikes heavily upon the lingual sur-

face, as the teeth wear away. The filling receives the occlusion and is dislodged together with the corner of the tooth. Now a step cavity with either a gold filling or an inlay, this lasts well, until perhaps the molars and bicuspid are lost or the teeth wear away until occlusion again dislodged the filling or a few months' neglect has caused the involvement of the pulp. The pulp is devitalized, the root filled, another inlay or crown is placed. In a few years more the patient develops rheumatism, endocarditis, Chronic Brights or gastric ulcer. If the root is comfortable, it may not be suspected. An accidental heavy pressure splits it, when no further mechanical arts can do anything for it except extract it. The extraction relieves the patient of her chronic systemic disease. A marvelous cure made by Dr. Brown or somebody's pink pills for pale people. The patient blames the dentist for splitting the root when the crown was being set, and the dentist blames the patient for cracking nuts with her teeth; none of them recognizing that the splitting of the root was a godsend and that the original caries was the serious misfortune. This is but a short history of a small cavity in the lateral incisor.

Who among us thinks over the future dental history of each tooth, as well as all the teeth, as we serve our patients from time to time? Until we can predict the dental future of our patients we will be unable to guide them through a long life with the best possible results.

CONCLUSIONS

1. It is the duty of the family dentist to take full charge of and responsibility for the maintenance of

the mouth and teeth in a state of health, no matter how many specialists he may call to his aid.

2. The operative dentist is the family dentist, the general dentist, the consultant, the diagnostitian.

3. The laws of heredity are as immutable in dentistry as in any other department of life. "Like begets like."

4. Dentists have enough to do in dentistry without reaching into the general practice of medicine.

5. There are more teeth lost by bad inheritance than by bad environment.

6. Heredity is a vital factor in caries, periodontoclasia, irregularities, and oral sepsis.

7. Acquired defects and deformities are not transmitted to the offspring.

8. Dentists should collect family histories.

9. Whether to extract or retain many teeth can only be arrived at after taking a family history, a dental history and consulting with the family physician.

10. More can be done for the longevity of a dentine in the first ten years of life than in any other three decades.

11. Sometimes it is better practice to remove perfectly sound first molars to improve the occlusion than to retain them.

12. There is a great deal more involved in capping a pulp than the mechanical operation.

13. There has been a false security behind vital pulps.

14. Dentists should learn to have faith in nature's ability to bring about recovery.

Case Reports

F. E. RISDON, M.D., D.D.S., F.A.C.S.

Young man, aged twenty-two, reports with a swelling on lower jaw left, extending from the cuspid area towards the Temporal Maxillary Joint. He states that he has had this for two years and that the swelling has increased, but that he has been operated on twice, once through the mouth and the second operation through the neck. The neck opening has never closed and the dressings were constantly soaked with discharge. He brought with him a small dental X-ray, showing an inverted impacted molar and the loss of bony detail. This X-ray was of the third molar area only.

Examination

Externally uniform swelling extends from near chin to well up on the Ascending Ramus. There is an opening under the mandible from which pus is escaping, the wound made by one of the previous operations. This has been irrigated daily for some months with no improvement. Inside the mouth, the mandible on the left side and the labial surface is much thicker than on the right side. All the teeth are in position with the exception of the third molar. He opens his mouth freely and there is no discharge to be seen inside the mouth, and further the bone does not give to pressure, so no egg-shell cracking. The man has not lost weight recently. No ulcers in the mouth. The lymphatics not enlarged. No evidence of tuberculosis or syphilis and no history of injury. Stereoscopic X-rays were requested and they showed a loss of bony detail and a large cystic area extending from the cuspid on the left side to the Ascending Ramus, including a fully developed tooth.

Diagnosis

Urinalysis negative, Wassermann negative. Blood count normal.

Growth is gradual and very slow. Has extended over two years. Young man under forty with no glandular involvement. No ulcers in the mouth with raised edges. No history of lues or tuberculosis. Almost entire absence of pain, so therefore syphilis, tuberculosis and malignancy may be ruled out. X-rays show an absence of bony detail with definite sclerotic borders with two molar teeth projecting into the cavity and one tooth inverted and lying in the cavity. Growth slow, no involvements of glands. History of discharge of fluid from the openings of previous operations and continuance of this discharge is likely maintained by the excretion from the mucous membrane lining of the cyst. If we were dealing with Osteitis Fibrosa, Osteogenesis, Sarcoma Osteomalacia, etc., the X-ray pictures would be different, and likely some of the other bones in the body would be involved. In this case, other bones were negative. The cysts are classified for convenience under two headings, first Infective, second Congenital. It is always difficult and almost impossible to be sure of the type of cyst, judging clinically and by X-rays, that is under consideration. The question is more or less settled when the cyst is removed because the Infective variety with one exception is always lined with Squamous Epithelium and the Congenital type with Columnar Epithelium. The one exception is when the impacted molar tooth with the usual sac surrounding the crown, remains buried and enlarges. In this case, it is lined with Squamous Epi-

thelium. The dental X-ray, in this case, was very misleading because it showed the retained molar inverted but it did not show the rest of the cyst. Still, if the bony detail is largely lost around the crown of an impacted molar, one should be suspicious that a cyst exists in this area. The diagnosis made here before opening was an Antigerous Cyst, but the diagnosis is open to question because the molar roots had responded to a vitality test and were projecting into the cystic space. Unfortunately the pathological report did not give the type of Epithelium found.

Treatment

When diagnosis is assured, this type of cyst should never be approached from the outside but always through the mouth. Great care should be exercised in the removal of any teeth that are necessary because of the danger of fracturing the mandible, but if the case has been well worked up, especially where stereoscopic X-rays are used, the thinness of the bone has been ascertained. I believe the best way to remove these teeth, specially the molars is to chisel them out separately, using very little force, and not using forceps. When the two molar teeth are removed it will be found necessary to extend the incision as far up on the Ascending Ramus as possible. That means an incision three to four inches long, going through the mucous membrane and periosteum and carefully but thoroughly removing the overlying structures with as little trauma as possible. The bone is now removed as far up on the Ascending Ramus as the cyst extends, so that the entire cavity is laid open. This cyst was found filled with pus and flocculent

material which was likely due to the infection from previous openings. Cysts of long standing are usually filled with amber colored fluid along with the flocculent material which is composed of serum blood corpuscles and cholesterin crystals. The molar tooth was found more or less free of the cavity of the thickened lining membrane and this was removed by gently separating it from the bone with periosteal elevators and teasing the sac out by grasping it with artery forceps. If this is done carefully the inferior dental nerve and artery is found lying beneath the sac and is seen throughout the entire cavity. It then remains for one to remove all thin bony areas on both sides and pack the cavity lightly with five per cent. Iodoform Gauze dipped in warm vaseline. The vaseline is used to facilitate its removal, but if bleeding occurs subsequently, the vaseline packing should be removed and the dry packing substituted. It will require six weeks to three months for this cavity to fill from the bottom upward.

In outlining the treatment, we are conversant with the fact that frequently the labial plate and bone is removed leaving the tooth in position as well as the cystic lining, hoping for a cure by irrigation and draining. While this method is used by excellent men, I would hesitate to use it for the reason that it required daily irrigations to keep it clean, and one is not assured that he has overcome the cystic degeneration. At present, my experience justifies more radical treatment, and the results in my hands, are more uniform. We expect in this case, that the mandible will be largely regenerated in three to six months' time.

What of the Future?

BY C. N. JOHNSON, CHICAGO, ILLINOIS.

Read before the sixtieth anniversary of the Ontario Dental Association,
May 16th, 1927.

On this, a notable anniversary of the Ontario Dental Association, it may seem appropriate in the midst of all our felicitations, to pause a moment and project our vision somewhat toward the future. The temptation on occasions like this is of course to reminisce of the past, and to cast longing eyes toward that intangible but often-referred-to time, the "good old days"; but I confess that I am always more interested in the future than in the past and I prefer to think of the possibilities ahead rather than of the achievements behind. By this I would not have it inferred that I have no interest in the history already made, or that I do not get the keenest delight in contemplation of the developments which have occurred since my association with the profession. I could speak of these developments by the hour, but I do not conceive that this would be as profitable as to consider somewhat seriously the prospects for the future, and I shall refer to the past only as it may seem to me an index of what we may expect in the days to come.

To get anything like a clear perspective of the future we must study somewhat the tendencies of the present, and we must face facts as we find them. In this view of the case I think we have much in the way of encouragement, and we have a few things which should give us pause. There never was a time in our profession when there was more *alertness* than there is now. The activity in our dental organization was never so pronounced as it is to-day, and it may be considered a very reliable barometer of the interest we have in our

profession, but mere activity does not necessarily mean progress. While we may marvel at the energy of a squirrel running frantically in a circular wire cage we may well question the intrinsic value of the results. Today we are not sufficiently in need of exercise that we must chase a rainbow to get it. The lesson we most need at the present time is how best we may direct our activities and conserve our energies that they shall net the most favorable results in a more orderly development of dentistry and a better service to the people.

In accomplishing this we have some hurdles to go over, and some rivers to swim. The way in the future, as in the past, will not all be smooth and the sooner we recognize this the better it will be for us and for dentistry. One of the problems of the future relates to the increasing tendency toward specialization in our ranks. How this matter may be regulated and brought within its proper bounds it is difficult to determine. Of the need of specialists there can be no question. They came as a real benefaction to do well some of the things that the general practitioner did indifferently. They have refined many of the phases of practice till today in certain things the people are receiving better service than would have been possible without them. But there are two chief considerations in which specialization has proved a handicap to the public rather than an advantage. One is the great inconvenience experienced by patients at times in being obliged to go from office to office to secure an ordinary type of service

which in the normal state of affairs should be rendered by one man. The fine line that is being drawn by specialists in some instances is illustrated by an incident which, though in all probability fictitious, at the same time represents a prevalent tendency. One may remark to another that Dr. So-and-So was specializing on the eye. "Which eye?" asked the other. If this thing continues we may expect to see one of our dentists announce that he is specializing on the left upper first bicuspid. Today if there is pain in the face or jaws the patient is often pathetically driven from pillar to post, one specialist after another looking wise, charging a fee, and sending the patient to some one else. No reflection is here intended on any honest effort that is made by specialists or others to run to earth the cause of any trouble, but the tendency is becoming too pronounced on the part of our specialists to go to the extreme on the one hand of passing all responsibility to some one else, or on the other to concentrate wholly on their own specialty and account for every ill on that basis alone. The difficulty with most specialists is that they can see nothing outside their own field, and they warp every case to fit their particular specialty.

And here is the trouble with specialization; it tends to narrowness of vision, and this is one of the cardinal sins of the professional man. In the future no man should be permitted to confine himself to a specialty till he has for some time engaged in general practice, and gained a sufficiently broad perspective to enable him to look on all sides of every situation. In this way only can he give the best service to the patient, and do honor to the profession.

The lament is often made, and it is here emphasized, that the old family physician is rapidly passing away, thereby depriving people of that solicitous care which can come only from

long and intimate association; and in dentistry the same thing is threatening. There is nothing sweeter in all human relationship, outside the family circle, than the affectionate understanding and solicitude developed between the professional man and the families he has served for years. Compared with this all the so-called superlative skill of the specialist sinks to miserably small proportions, and presents an altogether inadequate substitute. Let us pray for a continuance of the family physician and dentist.

One thing the future promises, and it is a very hopeful prospect, people are becoming more and more discriminating as to the kind of operations that dentists perform for them, and they are better able to judge the character of the service rendered. This must inevitably result in greater care on the part of the operator and, which is of equal significance, a more intelligent co-operation between the patient and the practitioner. When the time shall come, as come it must, that our patients exhibit a thoroughly sympathetic and helpful attitude toward the service we render them, the practice of dentistry, while more exacting, will be more fruitful and satisfying.

In the future there must develop a better *entente cordiale* between the physician and the dentist. The nature of the service rendered by the two callings makes it imperative that the most perfect understanding obtain between the two, and happily there is a pronounced and growing tendency in this direction. More and more dentists are recognizing the great value of associations with medical men, and physicians are coming to see that in matters pertaining to the mouth and teeth it is advantageous to take the advice of dentists. In the recent past this attitude has not always been obtained. Dentists have been too much inclined to be more or less insular in their attitude, and physicians have

sometimes seemed to forget that there was such a profession as dentistry. This has been manifest more particularly in the position they have taken regarding the question of focal infection in its relation to mouth conditions.

PULPLESS TEETH

When I began this paper I pledged this audience that I had not the remotest idea that I should even mention the subject of pulpless teeth. I felt in all conscience that sufficient had been written on it for the present, and that it was the logical thing to wait developments, and let the matter be decided in the alembic of a prolonged practical experience. But a recent public utterance from a man high in the councils of medicine has so stirred me that I cannot refrain from at least a brief reference to the subject. When a man of prominence in the medical world makes the sensational statement that a pulpless tooth is more potential for harm than a rattlesnake, and when this unfortunate statement finds its way into the public press where it is calculated to cause consternation in the minds of the people, and even among some of the less assertive in the profession, it is high time that a pronounced protest is made. There has never been in the annals of medicine or dentistry a more pointed example of aberration of mind than there has been in connection with this question of pulpless teeth. There has never been so much definite damage done to the people by any propaganda in the history of dentistry as there has by the well-organized propaganda against the pulpless tooth. Countless numbers of unfortunate people are going around to-day crippled in whole or in part for efficient mastication, and condemned for life to the handicap of an artificial makeshift, solely because of the fanatical and illogical prejudices against the natural teeth. It has almost come to a point in the minds of some professional men where they are

willing to claim that nature made a terrible mistake when she grew natural teeth at all, and that it would have been a better plan to start a rubber and porcelain factory in the mouth of every babe. The length to which this onslaught on the natural organs has gone constitutes itself one of the most pathetic and poignant pictures in dental history, and it looks as if it might be a generation before its evil effects are overcome. Even students in colleges without an iota of practical experience to give them a proper perspective are writing learnedly on the evils of the pulpless tooth, till the sane and conservative practitioner of years standing is wont to exclaim "how long, oh Lord, how long?"

No one wishes to minimize the possible evil effects of neglected pulpless teeth, no one of any sense or conscience will argue for the retention in the mouth of teeth that cannot be made healthy; but the assumption that a tooth when once pulpless is hopeless is one of the great outstanding errors of the age. Times without number it has been proved to be a fallacy, and as has frequently been stated, to assert that the average pulpless tooth cannot be made healthy by treatment is merely an acknowledgment of a therapeutic failure. It has been done so repeatedly and for so long a time that the findings of some of our recent investigators can no longer stand against more than half a century of practical experience. When I read some of the statistics that are sagely advanced against the pulpless tooth, and check them up with indisputable clinical evidence, I am impressed with the fact that about the only thing that cannot be proved by statistics is the truth.

One of the chief factors that has contributed to the continuance of the attack on pulpless teeth is not so much a matter of conviction as of convenience. To properly treat and fill a pulpless tooth is not very spec-

tacular nor profitable. It is easier by far, and much more remunerative, to extract these teeth and insert substitutes. How much this fact is accountable for the loss of so many teeth in recent years I am not permitted to say, but I have some very pronounced suspicions.

Every man of courage and conviction in the profession owes it to the public to fight this fanaticism till it is driven into the last ditch, where it may finally be submerged and perish from the face of the earth. Then and then only may dentistry hold up its head and claim the respect of the people.

DENTAL EDUCATION

Speaking of the students in our colleges brings up another matter with which the future must concern itself. Our dental educational institutions are undergoing a gradual evolution, and it is hoped that from this there shall develop a greatly improved order of things. But I sometimes think that in the concentration on the various proposed plans—the one-four, the two-three, the two-four, etc.—something very vital is being overlooked. To think of educating students solely in terms of months and years, to magnify semesters and semester hours; in other words, to provide a hidebound curriculum, and to make it the law and the gospel to discuss little but this in our educational bodies; is to fall far short of living up to our greatest possibilities as moulders of the minds of the professional men and women of the future. It seems to be the theory of most of the men in our colleges that their primary function is to inject a given amount of knowledge into the minds of their students. They read up on their various subjects, and go to the lecture room prepared to deal out the information thus gained. They are apparently all the while concerned with the problem of pouring knowledge into the student's mind, acting on the theory that the brain

of the student is a receptacle made for that purpose. It never seems to occur to them that one of the functions of the teacher is to bring something out of the student's mind as well as to put something in—in other words, to compel the student to do some thinking on his own behalf. If a body of students merely learn a lot of definitions and formulae by rote so that they can repeat them in a parrot-like fashion, they may thereby be able to pass a written examination, but they have not necessarily been compelled to think logically on any subject; and it is the ability to think and reason that really marks the man of learning. In his class work, in the laboratory, and at the chair, the students should be forced to give a reason for every statement he makes or for every technical procedure he performs. He should not be permitted to go blindly ahead and do things merely because he has seen others do them—he must know why he does them. All along the line of his college course he should be taught to use his reasoning powers, to exercise his brain. With this kind of training the student will come out of college with a mental equipment which will enable him to cope successfully with the intricate problems that are certain to confront him in every-day practice, and he will thus be better prepared to meet all the emergencies of professional life.

And then to go further and to bring college training to its most exalted function, the instructors in our professional schools should recognize a duty they owe to students which is intrinsically of a higher order than the mere imparting of technical knowledge. It is a function that seldom seems to occur to many of our teachers, but it is really fundamental in importance. It has to do, in addition to teaching the science and art of dentistry, with the teaching of right methods of living. It may seem like a far-fetched observation to affirm that

one of the duties of a teacher in a professional school is to concern himself with the moral fibre of his students, and yet in the proper preparation of a young man to assume the obligations of a professional life the development of moral character stands supreme. And it is just as much the duty of the dental teacher to instil in the minds of his class correct ideas on living, and on ethical procedure, as it is to impart technical knowledge. Few instructors in professional schools recognize the seriousness of their obligation in this respect. These young men come to college at their most impressionable age, and are more amenable to guidance than at any other period of their professional lives. A dental school which ignores its prerogative in this particular is not only overlooking a golden opportunity to do a most constructive service to humanity, but is actually open to the charge of being culpably derelict in duty. The proper education of a professional man means that he shall be prepared in the best possible manner to serve humanity after graduation, and no man is really prepared unless there have been interwoven in his education those principles of morality and right living which form the basis of true professional manhood. A man may have all the brilliancy imaginable and yet be a veritable whited sepulchre, and no man of this type has ever been known to be permanently successful as a dentist.

It goes without saying that the teacher in a professional school should never be pedantic, prosaic, or preachy. In his attempts to point his students to better modes of life he must not be continually moralizing with them. Nothing is more fatal to the influence of a teacher with a class than to be all the while pouring out doleful sermons to them; but he can at opportune moments, and in an apparently incidental way, point many a concrete lesson of the value of correct

living, and the fundamental foolishness of evil living. And it may be said in this connection that the most effective manner of impressing a class of moral rectitude is by way of example. Let the teacher live the right kind of a life day in and day out, and he will not need to say very much to the students about correct living. Intuitively a class of boys imbibe character or the lack of it from their teachers in their daily intercourse with them, and this adds to the sacredness of the obligation which every dental teacher owes to his calling.

Thus the future of dentistry will demand of all those who are charged with the education of our students a new vision, and a new dedication to the responsibilities involved. They must think of themselves not only as instructors in technical knowledge, but as exemplars of correct living, and they must not permit themselves to accept a position as teacher in a dental school unless they get this vision and are willing to live up to this requirement.

FULL DENTURE WORK

One of the things most urgently in need of attention in the immediate future is that of full denture work. When we consider the great number of teeth that are lost through unavoidable means, and add to this the increasingly great number that are unnecessarily lost we must reckon with very many edentulous mouths; and the responsibility of acceptably restoring these mouths by artificial means is squarely up to the profession. Much meritorious work has been done on the subject of full denture construction, and many able minds have devoted their best energies to it; but the simple fact is that to-day there is more confusion regarding the principles of full denture prosthesis than with any other department of dentistry. Some of the greatest men in this specialty differ so diametrically that the general

practitioner is driven into a dilemma and is left at sea without compass or rudder. Frankly and bluntly, up to this time very little of a fundamental nature has been definitely settled, and with equal frankness we may say in all seriousness that one of the reasons for this is that too many men connected with the development of full denture work have been more concerned with proving their pet theories than they have with reasoning out principles. An honest clash of intellect is conducive to the settlement of any great problem, but a dogged determination to cling to one's own particular prejudices, as has so frequently been apparent in this work, has never settled any thing of moment, and it never will. There are so many bright minds connected with this specialty that the only thing necessary is for the leaders to get together in a whole-hearted way, and approach the problem with an eye single to its solution, rather than to cling tenaciously, as they have in the past, to their preconceived notions, and their individual preferences. All it needs is breadth of vision, and a magnanimous acceptance of the truth when it is presented. Will not our leaders consecrate themselves to this task on behalf of a long suffering profession and public?

PREVENTION

With all the differences of opinion existing on such subjects as pulpless teeth, full denture work, and other matters of dispute in dentistry, it would seem to be a difficult task to bring the profession into unanimity of belief on these various topics; but there is one subject on which we may confidently expect that the profession will agree to a man. The prevention of disease is the ultimate goal toward which we are all willing to march in regular order. It is the keynote in medicine and dentistry, and much is being accomplished in this direction. Medicine has achieved greater triumphs in prevention than has dentis-

try, and it is a pleasure to pay her this tribute. Yellow fever, smallpox, diphtheria, typhoid fever, diabetes—those terrible scourges of generations past—have all been brought under subjection; and if people die from them to-day it is either because they do not chance to have access to the preventive measures, or are too stiff-necked and wilful to take advantage of them. The average tenure of human life has been greatly lengthened, and we are under deep obligation to medicine for this outstanding accomplishment.

And what shall we say of dentistry? By no means need we hang our heads when the charge is made that we have not yet succeeded in preventing dental disease. Surely we have not been asleep, and surely the efforts of our investigators have not all been in vain. It must be remembered that in dealing with dental decay we are encountering the most prevalent of all human diseases. More people are afflicted with dental caries than with any other known ailment, and it becomes so rampant at times as to be really devastating. We have no simple problem to solve. As yet we cannot inject a serum and prevent decay of the teeth as can be done with other diseases. Many years ago I ventured the opinion in an editorial utterance that the time might come when we should vaccinate for dental caries, and of course I was properly laughed at—as I deserved to be with the existing lack of knowledge of serum therapy. The only solace I had was a personal remark made to me by the late Dr. G. V. Black who said: "Never mind, you may not be so very far astray, after all." And yet while almost countless days have come and gone since then we seem no nearer to preventing dental caries by a serum than we were at that time.

What advancement has been made has come through a different source—through better regulation of diet, through better attention to mouth

hygiene, through educating the people as to the necessity of taking better care of the mouth, and through other tentative measures. Because up to this time all of our efforts have been more or less tentative, and experimental, for the very simple reason that we do not yet know what is the really significant factor in dental caries. We know that as acid causes the destruction of the tooth tissue, and we also know that this acid is produced in the process of bacterial propagation, life and death, but that is all we know. We cannot tell why it is that in some mouths these bacteria bring about decay, while in others they do not; because they may be found in all mouths. There is some determining factor which we do not yet understand, and I have the conviction that until we learn what this factor is we shall never prevent dental decay. And let it be understood that this factor is not associated with the tooth tissue itself, as some would lead us to believe. Whatever the factor may be, it is certainly environmental—it is an influence working from without instead of from within the tooth. The manifestations of dental decay when studied in the mouth year after year go to prove conclusively the truth of this statement, and it is only on this basis that we may ever hope to successfully combat the disease.

Time will not permit a further discussion of this question on the present occasion, but I would not leave this audience hopeless regarding the ultimate control of dental decay. That it will be controlled I have a firm conviction, even though to-day I may not be able to point the way. I have such sublime faith in the sincerity and devotion to duty of my professional colleagues that I know full well they will work out a solution of this problem as they have of others.

And I am inspired when I picture what may be done in the future for the benefit of my fellow-man; when

I look longingly at the star of hope and try to read the scroll of promise across the heavens of the western sky. My mundane vision may be dimmed and dull, but in fancy I think I see the dawning of a better day; and in that day the deeds of men stand out in bold relief against the failures of the past; and hope is high, and prospects fair, and courage unconfined.

I cannot tell, I do not know, what the future holds within its virile grasp. I cannot look beyond the heights and see the rising sun of science and of art. I cannot sweep the wide expanse of ocean's rhythmic roll, nor see the freight in all the ships that saunter in on every heaving tide. 'Tis not for me to tell to-day what technic triumphs loom upon the future's vast domain, nor weave the wizard warp and woof of all the days to come.

I cannot tell what finger-craft may do for dental art—what genius hides within its folds beyond our human ken. Nor do I know, nor can I see, nor may I even guess what magic means to check disease lie fruitful just beyond.

But this I know, and this I feel, that somehow, somewhere, soon or late, the cries of pain must cease, and little children, poor and rich, shall grow, and thrive, and smile. And drear disease shall meet its doom, and health and joy abound; and o'er the earth the sun shall shine on hamlet and on home. And hearts of men shall larger grow, and happiness abide; when you and I and all the rest shall welcome in the dawn, and see the glories of the east sweep back the fogs of doubt; and fear is banished from our minds, and hope and cheer are ours. And in that time—that blessed time—when science marries art, and love shall take the place of hate, and greed give way to grace; we'll leave the welter of the past, and smiling through our tears, we'll beckon in a brighter day for every child of man.

SOCIETIES

The Following Material is Now Available to Any Provincial or Social Oral Hygiene Committee or Dentist

Information Useful for Preparation of Public Dental Lectures—A thirty-five page booklet, containing statistics and general information on all phases of Dentistry, with a special Oral Hygiene Appeal. It also gives directions for the establishment of School Dental Clinics, including the cost of same, and list of equipment necessary.

The Dental Guide—An educational pamphlet on Oral Hygiene, particularly suitable for parents, young men and women, school teachers, nurses, etc.

Outline Lectures for Special Groups—Outline for Address to Rotary, Kiwanis, Lions,—etc.; Outline for Address to—Boy Scouts; Outline for Address on—Preventive Dentistry; Outline for Address on Mastication; Outline for Address on—Irregularities of the Teeth; Outline for Address on Tooth Decay, Its Cause and Prevention; Outline for Address on—Mouth Hygiene and Public Health; Outline for Address on—To Preserve the Teeth; Outline for Address on—What Examinations. Reveal.

Specially Prepared Complete Lectures:—

Lectures to Public Health Nurses.

Simple Addresses for School Teachers to read to Pupils.

Suggestions for the Conduct of Public Dental Service for Children.

Annual Reports of Dental Service, Department of Health, Toronto, 1925-1926.

Radio Talks:—

Preventive Dentistry.

Exercise.

Health Day.

Stories for Child Groups:—

Oral Hygiene Stories.

Better Health, Stories and Songs.

Health Almanac—1927—Department of Health, Province of Ontario.

Newspaper Articles:—

1st.—List of Titles—(Dentist to write his own material).

2nd.—List of Titles—(With a short suggestion for each).

3rd.—Complete, ready to print. (A charge of \$1.25, to cover cost of multi-graphing).

Lantern Slides:—

Books containing photographs of slides, some with text suggestions, will be sent on request. Slides can be purchased at twenty-five cents each.

Moving Picture Films:—

These will be available for the Autumn. Three films—titles to be announced later. These will be loaned to Provincial or Local Oral Hygiene Committees.

Book Shelf Service:—

The Council will, on request, try and secure the best and latest books on any phase of Oral Hygiene and Preventive Dentistry.

Address all requests for any of the above listed material to the Secretary of the Canadian Dental Hygiene Council, 86 Bloor St. W., Toronto, Dominion Headquarters.

Classification of the Dental Schools of the United States

Class A—University of Southern California, College of Dentistry, Los Angeles, Calif.; Atlanta-Southern Dental College, Atlanta, Ga.; Chicago College of Dental Surgery, Dental Department of Loyola University, Chicago, Ill.; Northwestern University Dental School, Chicago, Ill.; University of Illinois, College of Dentistry, Chicago, Ill.; State University of Iowa, College of Dentistry, Iowa City, Iowa; University of Louisville, College of Dentistry, Louisville, Ky.; Loyola University, School of Dentistry, New Orleans, La.; Harvard University Dental School, Boston, Mass.; Tufts College, Dental School, Boston, Mass.; University of Michigan, College of Dental Surgery, Ann Arbor, Mich.; University of Minnesota, College of Dentistry, Minneapolis, Minn.; Kansas City-Western Dental College, Kansas City, Mo.; St. Louis University School of Dentistry, St. Louis, Mo.; Washington University School of Dentistry, St. Louis, Mo.; Creighton University, College of Dentistry, Omaha, Nebraska; University of Buffalo, College of Dentistry, Buffalo, N. Y.; Ohio State University, College of Dentistry, Columbus, Ohio; Western Reserve University Dental School, Cleveland, Ohio; North Pacific College of Oregon, Portland, Oregon; Thomas W. Evans Museum and Dental Institute, School of Dentistry, University of Pennsylvania, Philadelphia, Pa.; University of Pittsburgh, School of Dentistry, Pittsburgh, Pa.; University of Tennessee, College of Dentistry, Memphis, Tenn.; Baylor University, College of Dentistry, Dallas, Texas;

Medical College of Virginia, School of Dentistry, Richmond, Va.; Marquette University, College of Dentistry, Milwaukee, Wis.

Class B—*College of Physicians and Surgeons of San Francisco, San Francisco, Calif.; University of Denver, School of Dentistry, Denver, Colo. (Formerly Colorado College of Dental Surgery); Georgetown University, Dental Department, Washington, D. C.; Howard University Dental College, Washington, D. C.; *Indiana University School of Dentistry, Indianapolis, Indiana (formerly Indiana Dental College); Tulane University of Louisiana, School of Dentistry, New Orleans, La.; Baltimore College of Dental Surgery, Dental School University of Maryland, Baltimore, Md. (Baltimore College of Dental Surgery was merged with it June 15, 1923); University of Nebraska, College of Dentistry, Lincoln, Neb.; Columbia University School of Dentistry, New York, N.Y. (Incorporated with the College of Dental and Oral Surgery of New York, July 1, 1923); New York University, College of Dentistry, New York, N.Y. (New York College of Dentistry was merged with it June 29, 1925); Temple University Dental School, Philadelphia, Pa. (Formerly Philadelphia Dental College); Meharry Dental College, Nashville, Tenn. *Report pending.

Unclassified—University of California, Dental Department, San Francisco, Calif.; Cincinnati College of Dental Surgery, Cincinnati, Ohio; Texas Dental College, Houston, Texas.

Montreal Fall Dental Clinic

The Executive of the Montreal Fall Dental Clinic, (November 3rd, 4th and 5th) wishes to make its final announcement with regard to this year's programme.

Prosthodontia, Root Canal Therapy, Crown and Bridge Work and Dental Radiography, will be represented respectively, by the following Clinicians.

Dr. W. H. Wright, University of Pittsburgh, "Full denture construction".

Dr. Alfred Walker, New York, "Therapeutics of the Pulpless Tooth".

Dr. L. W. Doxtater, New York, "The relation of balancing of the occlusion to the other steps in the con-

struction of removable bridgework, showing the use of the spring bar, split bar, Peeso split pin and tube and wrought gold clasp".

Dr. Howard Jackson, Detroit, "Radiographic Interpretation".

Exhibits and moving picture films will have their place, and last but not least, the social activities are planned to make it pleasant for all.

Applications with cheque for \$20.00, will be accepted only from a limited number, and in the order in which they are received by the Secretary.

Yours fraternally,

Dr. A. L. Walsh,

Chairman, Publicity Committee.

Proposed Changes in the Canadian Dental Association Constitution

J. STANLEY BAGNALL, D.D.S., HALIFAX

Why should changes be necessary in the Constitution of the Canadian Dental Association? The Association as it stands to-day is a tribute to the far-seeing men who saw the need and built to meet conditions as they were at that time, and it has filled a very vital place in the development of Canadian Dentistry.

When we think of a national dental organization we find that it embodies two more or less clearly defined ideas. We think on the one hand of a convention and on the other of what may be rather loosely defined as the business of the Profession. The term business is not a good one, but it is intended to include a variety of activities. A national organization may be interested in many schemes

for the advance of the profession, as well as for the protection of its interests. If an organization is to be national in scope it must have: 1. A large and active membership, thoroughly representative of all parts of the country. 2. Proper provision in its Constitution for the carrying on of the activities in which the Profession is interested; and 3. A sound scheme of financing.

The emphasis in the past has been placed on the Convention idea and but little attention paid to these other activities of the Profession. The Executive consisted of a body hastily formed during the convention and without time or opportunity to become conversant with the various activities of the Association and to formulate

plans for their advancement before they were practically disbanded by the termination of the Convention. The membership was never at any time large nor representative of the country as a whole. The net result has been that but little attention has been paid by the Association to the many beneficial activities which it might have considered and as distances are so great the plan of holding one national convention every two years left much to be desired.

It was to overcome these difficulties and suggest something which could be a real help to the profession that the proposed changes now outlined in the magazines were prepared. The work has been progressing steadily since it was first advocated by Dr. Bradley in his presidential address in Vancouver in 1924 at the Canadian Dental Association meeting. It was advanced another step by a motion introduced by Dr. Seccombe at the meeting in Halifax in 1926. This led to a meeting of delegates from most of the Provinces at Toronto last May and the Provinces not represented at that time have since assured us of their sympathy with the scheme.

It was my privilege to listen to the discussion of this group of Provincial representatives and to the suggestions of some of the men since elected to meet with this body, and I could not help feeling that the profession in Canada was indeed fortunate to have so many able men so interested in its advance. While the scheme proposed follows very closely the trail already so well blazed by our medical confreres whose problems are similar to our own; it, at the same time, preserves many features of our former constitution.

We have heard it said that a thing well started is half done. It has taken hard work to bring the scheme to its present stage, and it is doubtful if ever before there has been such a widespread interest on the part of the profession in every section of Canada

to get together and advance our common aims and ideals. It is peculiarly fitting that in this year when the Confederation celebration has so concentrated our thoughts on the unity of Canada that we as dentists should be striving to remodel our own Association so that we, in the fullest way possible, may take our part in the growth and development that is to come. The scheme is not for the few, but for every one. No national organization can meet its fullest success unless each and every dentist in this fair country lends his active support to its development. We may not all agree with the scheme as proposed, and there will be ample opportunity to discuss those points later, but we can all agree that there is a real need for an organization which will, in a national way, do its bit to advance our profession to that position we all wish it to occupy.

J. STANLEY BAGNALL,

Sec'y, Canadian Dental Association,
34 Larch Street,
Halifax, N.S.

CANADIAN DENTAL ASSOCIATION CONSTITUTION

ARTICLE 1.

This Society shall be known as the Canadian Dental Association.

ARTICLE 2.

The particular objects of this Association shall be: To cultivate and promote the art and science of Dentistry and all its collateral branches; to conduct, direct, encourage, support or provide for exhaustive dental and oral research; to elevate and sustain the professional character and education of Dentists,—to promote among them mutual improvement, social intercourse and goodwill; to disseminate knowledge of Dentistry and dental discoveries; to enlighten and direct public opinion in relation to oral hygiene, dental prophylaxis, and advance scientific dental service; to have cognizance of and safeguard the common interests of the members of the dental profession; with express power to acquire property for the purposes of the corporation by purchase deed, gift, bequest or otherwise, and to hold and administer the same and to publish dental journals, reports and treatises, and such other lawful

means as are conducive to the attainment of the above objects.

ARTICLE 3.

The code of ethics of the Association shall be such as may be adopted by the Association from time to time. An official copy shall be kept in the possession of the Secretary, and shall be open to inspection at all times.

ARTICLE 4. MEMBERSHIP.

The Association shall be composed of active, honorary and associate members.

1. Active members must be regularly qualified dentists in Canada, those engaged in teaching of research work in dentistry, or the allied sciences in Canada.

Senior members shall be active members who, having attained the age of 70 years, may be elected by unanimous vote of council present and voting.

2. Honorary members must be persons who have distinguished themselves and risen to pre-eminence in dentistry, the allied sciences, literature or statesmanship.

3. Associate members must be regularly qualified practitioners of dentistry or of the allied sciences, not resident in Canada.

4. Honorary and Associate members shall have all the privileges of the Association except the exercise of the franchise, and they shall not be eligible for election as officers or members of any Committee.

ARTICLE 5. BRANCH ASSOCIATIONS.

Any Interprovincial, provincial or local Dental Association in the Dominion of Canada may, by official resolution of such Association, become a Branch of the Canadian Dental Association by subscribing to its constitution, by-laws, and code of ethics, and by securing the approval of the Board of Delegates. They shall submit to the Board of Delegates a copy of their constitution and by-laws and such amendments as may be made from time to time.

ARTICLE 6. AFFILIATED SOCIETIES.

Any nationally organized dental, medical, scientific or sociological body may become affiliated with the Canadian Dental Association by securing the approval of the Board of Delegates. They shall submit a copy of their constitution and by-laws and such amendments as may be made from time to time.

ARTICLE 7. MEETINGS.

The meetings of the Association shall be held at such time and place as shall

be determined by the Board of Delegates.

ARTICLE 8. OFFICERS.

The Officers of the Association shall be a President, a President elect, a Vice-President for each province, a Chairman of the Board of Delegates, and a General Secretary and Treasurer.

ARTICLE 9.

The Board of Delegates shall consist of:

a. The Officers.

b. The Delegates from the various Provinces, as follows:—

Each Province shall be entitled to elect or appoint one delegate to the Board of Delegates, who shall be the Vice-President of the Canadian Dental Association for the Province, excepting the Provinces of Ontario and Quebec, which shall each be entitled to elect or appoint two delegates, one senior and one junior. The Senior Delegate shall be the Vice-President of the Canadian Dental Association for that Province. Payment of expense account of one delegate only from each Province will be paid by the Canadian Dental Association.

ARTICLE 10. COMMITTEES.

The Committees shall be:—

a. Standing.

b. Special.

c. Reference.

All committees when not otherwise specified shall be appointed by the Board of Delegates and consist of not more than five members, and shall report to the President or Board of Delegates when required.

ARTICLE 11. FUNDS.

Funds for the purpose of the Association shall be raised by an annual fee from each active member, the amount of such fee to be determined by the Board of Delegates; from the Association's publications and in any other manner approved by the Board of Delegates.

ARTICLE 12. THE ASSOCIATION YEAR.

The Association year shall be the calendar year.

ARTICLE 13.

No amendments to any of the foregoing articles or sections thereof shall be made, unless due notice has been given in writing to the General Secretary at least six months before the meeting at which they are to be discussed.

Any such notice of motion must be forwarded by that Officer to members of the Board of Delegates and the

Secretaries of the Official Provincial Organization, also published in at least two Canadian Dental Journals chosen by the Executive Committee. No amendment shall become effective until sanctioned by a three-fourths vote of the Board present and voting, and ratified by the Association in open meeting.

BY-LAWS.

CHAPTER 1. MEMBERSHIP

Section 1. Any ethical dentist residing in Canada may become an active member of the Canadian Dental Association, providing:

(a). He is a member in good standing of a Voluntary Dental Association in the Province where he resides, if such Association exists. Where such Association does not exist, he may be elected to membership by the Board of Delegates on nomination of two members of the Canadian Dental Association in good standing.

(b) That he pays the annual fee and subscribes to the Constitution and By-laws and code of ethics of the Canadian Dental Association.

If by March 31st, the annual fee for the current year has not been paid, membership automatically lapses. Reinstatement at any time during the current year may be obtained by payment of the current fee.

Section 2. Senior life members shall enjoy all the rights and privileges of the Association, but shall not be required to pay any annual fee.

Section 3. Associate members may be elected by the Board of Delegates from among regularly qualified dental graduates residing outside of Canada.

Associate members shall have no voting power and shall not be called upon to pay any fees.

Section 4. Any delinquent member having once failed to comply with the sections of this article shall not be restored to membership until all such dues, as may be determined by the Board of Delegates, have been paid, and satisfactory evidence produced that he retains his membership in his voluntary association, if admitted through such channel.

Section 5. Honorary Members may be nominated by any member of the Association and shall be elected only by unanimous vote of the Council present and voting. Not more than five honorary members may be elected in any one year, and at no time shall the list of living honorary members exceed twenty-five. Honorary members shall

enjoy all the rights and privileges of the Association, but shall not be required to pay an annual fee.

Section 6. No member shall take part in the proceedings of the Association, nor in the proceedings of any of the sections thereof until he has properly registered and paid his annual dues.

Section 7. The membership fee shall be 50 cents per member per year. This fee, where possible, may be collected through the voluntary organization in the various provinces.

Section 8. Membership of all classes may be declared forfeited by the Board of Delegates for reasons considered sufficient by that body.

CHAPTER 2. GUESTS AND VISITORS.

Section 1. Dental practitioners and other men of science residing outside of Canada may attend the annual meeting as guests of the President or of the Board of Delegates, or as visitors, when vouched for by the General Secretary. They shall register with the General Secretary, without payment of fee, and may, after proper introduction and the consent of the Chairman, be allowed to participate in the discussions of a purely scientific nature.

Section 2. Lay members of affiliated associations or societies may, upon the invitation of the President and Chairman of Programme Committee, attend the annual meetings and participate in the discussions of a purely scientific nature.

Section 3. Dental students who are eligible to attend their provincial society may be admitted as visitors to either the general meetings or to the meetings of any of the sections thereof, and on the same terms as to their provincial society, but shall not be allowed to take part in any of the proceedings. They shall be vouched for by a member of the Association to either the President or the General Secretary.

CHAPTER 3. MEETINGS.

Section 1. The time and place of meeting shall be decided upon by the Board of Delegates, and shall be announced as early as possible.

Section 2. When the Canadian Dental Association meets in any Province where there is a Branch Association, the meeting may be held in conjunction with that Branch Association, and the local association or society may have control of the arrangements under the direction of the Dental Association of the Province and the General Secre-

tary of the Canadian Dental Association.

Section 3. The meetings shall consist of general sessions and scientific sections.

Section 4. The President shall preside at all general meetings. In his absence, or upon his request, one of the Vice-Presidents shall preside.

Section 5. The Rules of Order which govern the proceedings of the House of Commons of Canada shall be the guide for conducting all meetings of the Association.

CHAPTER 4. MEETINGS OF SECTIONS.

Section 1. The sections to be held at any meeting shall be appointed by the Association or Society in charge of the meeting.

Section 2. The Chairman shall preside at all meetings of the section, and with the aid of the Secretary of the section shall arrange for the papers and business of the section.

Section 3. The Secretary shall keep a correct account of the transactions and record them in a special minute book provided by the General Secretary. The Chairman must verify and sign the minutes, which must be returned to the General Secretary at the close of the meeting.

CHAPTER 5. ELECTION OF OFFICERS

Section 1. The President elect and Chairman of the Board of Delegates shall be elected *by ballot without nomination* by the Board of Delegates. Other officers of the Association shall be appointed by the Board of Delegates.

Section 2. Any five members of the Association may hand to the General Secretary, in writing, not later than the first day of the meeting, the name of a member whom they may wish to nominate for any office.

CHAPTER 6. DUTIES OF OFFICERS.

Section 1. The President shall preside at the general sessions of the Association and shall perform such duties as custom and parliamentary usage require. He shall deliver a Presidential address. He shall be a member ex-officio of all committees.

Section 2. The President Elect shall be installed and shall assume the office of President at the close of the last general session of the meeting next following his election.

Section 3. The Vice-President of the Province in which the meeting is held shall be the first Vice-President of the Association for that year and shall

assist the President in the performance of his duties.

Section 4. The Chairman of the Board of Delegates shall preside at all meetings of the Board of Delegates and shall be ex-officio a member of the Executive Committee.

Section 5. The Treasurer shall receive and collect from the members the annual fees and demands of the Association. He shall be the custodian of all moneys, securities and deeds, the property of the Association. He shall pay by cheque only on authority of the minutes and covered by voucher.

He shall prepare an annual financial statement audited by a Chartered Accountant.

He shall furnish suitable bond for the faithful discharge of his duties, the cost of which shall be borne by the Association.

He shall receive for his services an honorarium to be determined by the Board of Delegates. He shall be reimbursed for his legitimate travelling expenses incurred in attending the meeting.

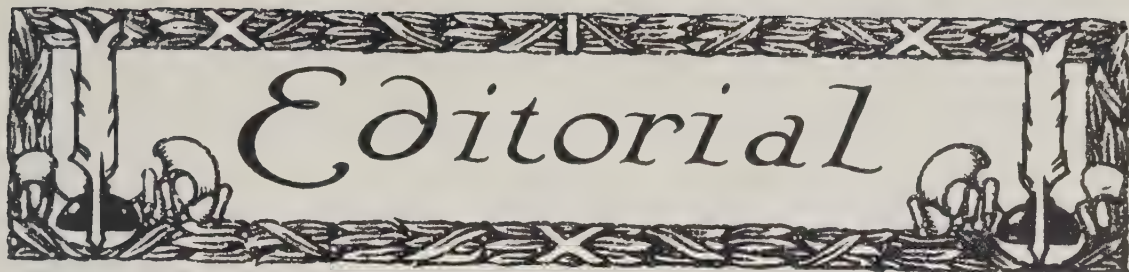
Section 6. The General Secretary shall also be the Secretary of the Board of Delegates and also of the Executive Committee of the Association. He shall give due notice of the time and place of all meetings, by publishing same in the official journals of the Association, or if necessary by notice to each member. He shall keep the minutes of each meeting of the Board of Delegates, and the Executive Committee in separate books, and shall provide minute books for the Secretaries of the different sections which he shall see are properly attested by both the Chairman and Secretaries thereof. He shall notify the officers and members of the Committee of their appointment and of their duties in connection therewith. He shall conduct all correspondence of the Association and shall publish the official programme of each annual meeting. He shall preserve and index the archives, the public transactions, essays, papers and addresses of the Association, and shall perform such other duties as may be required of him by the President, the Board of Delegates, and Executive Committee.

CHAPTER 7. THE BOARD OF DELEGATES.

Section 1. Appointment of Delegates:

(a) In those Provinces which have a voluntary province-wide organization, the delegate or delegates shall be appointed by this voluntary organization.

(To Be Continued)



Editorial

Editor:

A. E. WEBSTER, M.D., D.D.S., M.D.S., Toronto, Canada.

ASSOCIATE EDITORS:

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Vol. XXXIX

TORONTO, OCTOBER, 1927

No. 10

Instruments and Equipment in Dentistry

Progress in a calling is often indicated by the perfection of its equipment. "A carpenter is known by his tools." So is a dentist. Few members of the dental profession appreciate the importance of a knowledge of a dental equipment. Few dental teachers realize that almost seventy-five per cent. of the student's time is spent in learning the use of dental instruments and equipment, and still fewer of them realize how inadequately trained many graduates go out.

Dr. Black made his impression on operative dentistry not only by a classification of operative procedures but also by devising and classifying instruments and equipment to meet every condition in the treatment of dental diseases.

The so-called Black method of cavity preparation has its hold on the profession mainly because so many students of his day were thoroughly trained in the classification and use of dental instruments and equipment. He provided a complete system and taught it in detail. He left little to the imagination; he stated and recorded everything.

He once stated that there is only one best method of doing anything. There can hardly be two methods equally good. Black, by his systematic methods of practice, was the greatest dental economist

of all time. Brother Bill and his ilk are not even good thirds in dental economy as practised by the followers of Black.

We present the following rules for arranging a dental equipment to supplement Dr. Black's system. A dentist whose instruments are not conveniently arranged is wasting his time. There can be only one best arrangement.

GENERAL SUGGESTIONS FOR THE ARRANGEMENT OF INSTRUMENTS

1. The most frequently used instruments should be in the most convenient places.
2. Instruments for the same operation should be kept together.
3. Instruments should be kept in order of their use.
4. The order of size and number should be recognized where possible.
5. Instruments or equipment which are sharp, heavy, caustic, or poisonous should not be placed above the shoulder line.

Notes

Dr. Daly of Radisson, Sask., has taken over the practice of Dr. N. M. Dunsworth of Edmonton for the summer months while Dr. Dunsworth is away on a motor tour of the Western States. Dr. Daly is looking Alberta over with the intention of locating in the Province.

Dr. MacDonald, formerly of Medicine Hat, has moved to Edmonton where he will practise in future.

Dr. Budd of Ponoka, Alta., has sold his practice to Dr. Addinell. Dr. Budd is moving to California to open up an office.

Dr. Sutherland, Alta. University, 1927, has taken over Dr. Lumb's practice in Drumheller while Dr. Lumb is on his vacation.

Dr. M. A. McIntyre, Edmonton, has just returned from a two months' vacation at the coast.

Dr. A. B. Mason, Edmonton, returned last week from a motor trip to Banff, the Yoho and the Windermere.

We regret to report the death of Dr. George Hermiston, who for many years was a member of the staff of the R. C. D. S.

Dr. A. W. Ellis and Dr. Eudore Dubeau represented Canada at the recent meeting of the Dental Federation.

Dr. Harry Thomson, general secretary of the Canadian Oral Hygiene Council, addressed the conference of the Canadian Social Hygiene Council on the subject of "Teeth and Health".

A special permit must be obtained to get alcohol for dental purposes in public clinics.

Dr. Eugene Farrell, Montreal, died September 20th, 1927.

A dentist in Vancouver was accused in court of assaulting a patient by taking his false teeth from him which he had admitted he had not paid for. The magistrate ruled there had been no force used and dismissed the case.

Dr. A. W. Lindsay of Chintan University, China, has returned, awaiting the time when the Chinese will settle their differences.

Mr. E. H. Carleton, Edmonton, was fined for practising dentistry without a license.

The Manitoba Dental Association has made arrangements with the Winnipeg Free Press to publish information on oral hygiene, and answer questions on matters of dentistry.

Dr. F. E. Doering of East Africa, was a recent guest of Dr. Hall, of Victoria, B. C. Dr. Doering once practised in Victoria, also Johannesburg, and is now studying the growing of coffee.

Because a tooth when extracted from a person suffering from rheumatism and placed under the skin of a rabbit causes the rabbit to die, does not prove that the tooth was the cause of the patient's illness.

Dr. Mabel Connell, with her husband, will practise dentistry at Govan, Sask.

It is thought by well informed physicians that eye troubles are more commonly caused from the teeth than suspected.

The editor of the Journal of the American Medical Association, and of Hygeia the Health Magazine, says to keep the teeth from decaying.

The most that anyone can do is to keep teeth clean by the best meth-

ods possible to overcome acids by the use of proper alkaline washes or pastes, and to see that the diet is of the proper nature to keep the teeth in a state of satisfactory nutrition.

A Detroit paper says a dentist of that city has discovered the fact that teeth which have become irregular in childhood from bad habits will correct themselves if the bad habits are given up.

D. Sirkus, convicted before Magistrate H. Lacerte, in the provincial police court, Monday afternoon, for practising dentistry without being licensed thereto, was fined \$400 and costs or six months in jail. This is the second time that Sirkus has been found guilty of breach of the Dental act. J. E. McAuley prosecuted on behalf of the Manitoba Dental Association.

Editor of D. D. J. As one friend might say to another, it is well to stick to one's own job. Dr. Morris may know something about general medicine, but not all about the prevention of Dental Caries.

Dr. C. E. Biehn, Windsor School Dentist, will give monthly lectures on oral hygiene.

Some dentist should write a series of articles for the layman explaining what is meant by local anaesthetic, general anaesthetic, crowned teeth, devitalization of the pulp, gum boils, and dozens of other words and expressions in common use by dentists and the public. Because of ignorance of the meanings of such things, many people think they have been deceived or hoodwinked in some manner when things don't turn out as they expected them.

Some day both physicians and dentists will realize that the extraction of teeth is a major operation. At Oshawa on September 23rd, Mrs. Stewart came to her end following the administration of ether by a physician, and the removal of several teeth by a dentist. The coroner's jury said the patient came to her death from the effects of surgical shock following a dental operation. They said the patient should not be left without medical attendance until she recovered consciousness. It appears from the evidence as reported that the physician left the patient while still unconscious, and the dentist left after she was able to spit out when told. She died before medical aid reached her.

Speaking of diet. The platter kills more than the sword.—*Osler*.

Dr. Eudore Dubeau was elected Secretary of the Section of Dental Teaching at the recent Dental Federation Meeting at Copenhagen.

McGill University has inaugurated a post graduate course in Dentistry, lasting one year. There were sixteen applicants for the first course but there were only six accepted. It was felt to be wise not to accept too many for the first course.

Each student is working in a different department at the hospital, an interchange being arranged every few weeks. At the end of the course each student will have completed five weeks of intensive work in the pathological laboratory at the Montreal General Hospital; five weeks in general anaesthesia and dental operations including the use of ether, ethyl chloride and nitrous oxide; five weeks in dental surgery, and one week in the department of radiography, in addition to having attended a large number of lectures and special demonstrations.

Work will be done in orthodontia and some 23 patients who have applied for treatment at the hospital will be treated by the dentists under the supervision of Dr. A. W. McLeland.

Dental Services for Government Institutions in Ontario

Hon. Lincoln Goldie, Provincial Secretary, stated yesterday that the increased dental supervision and inspection which he had programmed at the last session of the Legislature for the various Provincial institutions had been "lined up". "From now on," he stated, "every place would be well looked after."

The jails at Fort William, Burwash, Guelph and the Mercer Reformatory and the Provincial hospitals at Orillia, Mimico, Toronto, London,

Woodstock, Hamilton, Whitby, Cobourg, Kingston, Brockville and Pene-tang are benefiting now from the broadening out of departmental arrangements. With a couple of exceptions, patients at these institutions will be treated by local dentists, who will give from one-half to three half days a week of their time in this regard as circumstances demand. Internes have been stationed at the Whitby and Orillia institutions, for the time being at least, on account of the large population.

CORRESPONDENCE

Dr. Webster,

Dear Sir,—

I have a patient, a woman about 25, very stout, (250 lbs.). She came to me about two months ago with a severe aching lower right third molar tooth. I could see no cavity or any cause for the pain, so I took it out as she wanted it out. While taking it out I found an abscess just below the gum line on the buccal side. Her right ankle which had been swollen for about a week previous to extracting the tooth, immediately went down. About two or three weeks later she came back complaining of the left lower third molar and her left ankle had started to swell. I treated it with iodine and probed for an abscess as was on the right one, but there was none as far as I could find. Finally, I had to take it out and there was an abscess on the buccal surface. Neither of these teeth had cavities. She has only two fillings in her mouth, and these I put in the last month. Now the two lower left molars are bothering her (not severely) similar to the ones I extracted, and have been for about the last two weeks. Left ankle again swollen. In the last week in the region of the upper right cuspid and bicuspid has become sore and sensitive to cold air with sudden attacks of pain for about half a minute at a time. Six years ago she had Pyorrhea, but was treated successfully. Her teeth now are in good occlusion, in fact better than the average person, only two fillings and only two extracted (third molars lower). Her tonsils are in very bad condition and she is subject to fits of some kind. She has also been bothered with severe itching in her left ear which her medical doctor says is eczema. There are no signs of pyorrhea or gingivitis, except the lower

left second molar is a little sore to bite on at times. I have advised having X-Rays, but she is not inclined to have them. I think I have given you as much of the history I can and if you could give any information which would help me clear this up I would be very much obliged.

Fraternally yours.

Editor.—Your patient is likely suffering from what is called dry pyorrhea alveolaris. That is, there is little pus to be seen. X-Rays would help a good deal to clear up the diagnosis. There are likely many deep pockets. She is likely suffering from oral sepsis and focal infection. The local infections may be gotten rid of by instrumentation if not by extraction.

Dr. A. E. Webster,

Faculty of Dentistry,

University of Toronto, Canada.

My Dear Sir,—

The following data was given me the other day by one of the medical men here. Maybe you will find it of interest:—

About two months ago Mr. X—, farmer, 55 years of age—leading an active outdoor life, temperate in habits, presented himself for advice re occasional signs of indigestion not of a marked character. Advised to have his teeth examined.

One month later he had 12 teeth extracted in a dental office without any preliminary prophylaxis. Drove home, quite a distance, after extraction.

Five or six days later he came to his physician with chills, temperature 102 degrees, headache, rapid pulse, malaise, and slight endocardial friction.

Admitted to hospital at once.

Blood examination showed streptococcus. This was confirmed by the

provincial bacteriological laboratory, but, unfortunately, the "strain of strept" was not ascertained.

Patient gradually grew worse.

Streptococcal pneumonia set in and patient died.

The above, I know, is very condensed, but the main points are there.

I have seen other cases quite similar, but not so drastic. Are we too negligent in our diagnosis and, in a mechanical manner, extract or rather "pull teeth" without regard to the associated gum pathology, and the general condition of the patient?

I am, yours respectfully,

Anne S. Mackenzie.

Book Review

"Morning in the Marsh" by Mark G. McElhinney, Ottawa. This is a volume of poems written for lovers of the great outdoors. Dedicated to Dr. McElhinney's son who fell in France. The author and the publishers have done well in making an attractive little book. Among the beautiful verses may be found a delightful expression and appreciation of nature's charms and her storms. "Thoughts at Lake Louise" and "Bluenose Blood" are especially Canadian and characteristic of the book. We here print "The Meadow Lark":

'Mongst all the little choristers
Of hill and plain and dale,
I love the little meadow lark
Who cheers the prairie trail.

Up from the sod where bluebells nod
And the blood lilies flame
He seeks the nearest perch to trill
His welcoming acclaim.

He fain would burst his little throat
To tell his joy for me,
For life for him from dawn to dark
Seems one sweet ecstasy.

OBITUARY

Dr. Louis St. C. Saunders was born at Lawrencetown, Annapolis County, 69 years ago, the son of the late Mr. and Mrs. P. H. Saunders. He graduated from the Baltimore Dental College in 1894. Returning to Nova Scotia, Dr. Saunders practised at Annapolis Royal and Middleton, coming to Kentville in 1896, where he remained until 1910, when he removed to Calgary. He practised in that city for a time, later going into the real estate business. In 1922 he returned to Kentville and opened a dental office. Two years ago he gave up practice, and since that time has been engaged in the real estate and insurance business.

Dr. Saunders took an active interest in the commercial and social life of the town and was a staunch member of the St. James Anglican Church and a valued member of the Church Choir. He also took a keen interest in sports.

Dr. Saunders was president of the Kentville Branch of the Society for the Prevention of Cruelty to Animals and Vice-President of the local branch of the Victorian Order of Nurses.

Dr. Saunders is survived by his wife, formerly Miss Bell, of Sackville, N. B., one daughter, Mrs. Gerald Dwyer of Halifax, and a sister, Mrs. Charles Turner in the United States.

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teeth and in the hardening and giving better tone to the gums.

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Abstracts

PLAIN WORDS ON FOCAL INFECTION

A weighty and sane paper on the "Relation of Oral Sepsis to Disturbances of General Health, with comments upon the Controversy regarding Pulpless Teeth," by Dr. Lewellys Barker, appears in the January number of the *Dental Cosmos*. The position of the writer as a physician of international fame and the wide circulation of the journal in which it appears will ensure for it a careful consideration by dentists in America. It is equally deserving of study on this side of the Atlantic and we commend the paper to our readers as a contribution, timely, courageous, and thoughtful, to a subject of vast interest but abounding to an unusual extent in speculation and unbalanced thinking. Dr. Barker is fully convinced of the importance of focal infection, but he points out that, "owing to the lamentable tendency in this country (i.e., the United States) to push ideas and practices to extremes, there has, during the last quinquennium especially, been clear evidence of over-emphasis upon the importance of focal infections as a cause of both local and general bodily disorders." He is especially severe on the Trenton school of psychiatrists (i.e., H. Cotton and his followers) who have attributed the majority of mental diseases to toxæmias resulting from local infections, and claimed that nearly all insane patients can be cured by removal of infected teeth, &c. He characterizes these views as absurd in theory and tragic in practical results. He quotes with approval the saying of a neurologist of Philadelphia, Dr. Mills, that, "if the craze for violent removal goes on, it will come to pass that we shall have a gutless, glandless, toothless race and that we may have, thanks to

false psychology and surgery, also a witless race."

He has no sympathy with the view that all pulpless teeth, on that ground alone, should be removed. The mere presence of bacteria in a pulpless tooth, or the tissues about it, is not in his view, a reason for advocating extraction of all such teeth. He recalls the fact that bacteria, both pathogenic and saprophytic, may be found habitually in the skin, nose, sinuses and gastro-intestinal tract, and suggests that this should make us less afraid of bacteria in the gums. Of course, it goes without saying that he is fully alive to the fact that under various conditions bacteria which may be otherwise harmless may assume definite virulence and be capable of infecting the body from some localized lesion. He criticizes the experiments of Weston Price on the result of implanting a pulpless tooth under the skin of a rabbit, and says that the sequelæ which result from this experiment are no proof that the retention of such a tooth in its normal position has been doing harm.

Dr. Barker is equally critical of Rosenow's theory of elective localization. It is interesting and suggestive but it is still *sub judice*, and he states that the consensus of opinion among bacteriologists is that Rosenow's views are less firmly established than its advocates would have us believe. Dr. Barker has some sharp comments to make on the amount of "pseudo-research" which is being carried on at the present time. He states that it is not only useless but harmful. "Not only are masses of inaccurate and insignificant data being accumulated for the bolstering up of purely speculative conceptions, but not infrequently data, that in themselves are accurate and



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valuable, are being illogically interpreted because of inability to weigh evidence or legitimately to apply it."

These are hard words, but who can doubt that the criticism though severe is justified?

Worthy Research Versus Pseudo-Research

The value of well-planned, accurately conducted and competently supervised clinical and experimental investigations for the solution of puzzling problems in medicine and its special branches (including dentistry) is so generally recognized that "original research" has become a slogan that is tempting many men who are unfitted, either by nature or by training, to engage in it, and is leading other men with real ability but insufficient training to work without wise guidance or competent control, to the same course. Some of these men are animated by worthy motives, and are to be pitied; some of them, it is to be feared, are incited to it by unworthy motives, and they are to be blamed. For social approval and disapproval are powerful determining influences that should be made use of for human welfare, even if the antisocial conduct of men, from the viewpoint of infinite understanding, may be forgivable.

Those in a position to know, realize that there is a vast amount of so-called "original research" being prosecuted by individuals (and by groups) that is not only useless for, but actually harmful to, scientific progress. Time, energy and materials that should be put to better use are being squandered. Not only are masses of inaccurate and insignificant data being accumulated for the bolstering up of purely speculative conceptions, but not infrequently data, that in themselves are accurate and valuable, are being illogically interpreted because of false premises or because of inability to weigh evidence or legitimately to apply it. As results, theories that are false are erroneously believed to be well established, and principles that are untrue find application in practice. Partial truths, too, are exploited before their content in error has been recognized and weeded out.

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Dominion Dental Journal

VOL. XXXIX

TORONTO, NOVEMBER, 1927

No. 11

ORIGINAL COMMUNICATIONS

Afterthoughts Concerning Impressions for Full Dentures

RUSSELL WILFORD TENCH, D.D.S., 116 CENTRAL PARK SOUTH, NEW YORK, N.Y.

In one sense an afterthought is a reflection concerning an act that occurs too late to affect that particular act. In another sense an afterthought concerning a procedure oft repeated, may be a forethought. The use of afterthought concerning past efforts in denture impression technic to favorably influence our attitude toward future efforts, is the object of this paper.

Afterthoughts in this field usually occur some time after the appliance, made from the impression, is inserted and it is therefore rather difficult to limit the treatment to impressions alone. We are led to consider results that follow the insertion of dentures.

Whether one's afterthoughts, concerning the final outcome of impression technic, may be pleasant or tinged with disappointment depends, aside from manipulative skill, upon the angle from which he approaches the problem of impression technic and upon the ideals he has set up for himself as well as his conception of what constitutes the true use of an ideal.

If he approaches the subject as one of general physics and forgets the biologic or physiological biologic aspect of the subject, disappointment is more of a certainty than a chance.

If he approaches the subject as he should, he will take cognisance that he is preparing appliances that are to function on living tissue. He will know that nature never intended that foreign bodies should find lodgment continuously against the tissues of the oral cavity usually covered by dentures, and that she has neither shaped the physical form of the mouth for this purpose nor planned the structure of the delicate tissues to maintain their integrity against thoughtless abuse. He will understand that to get best results it may be necessary to alter the form of the ridges and always to proceed with thoughtfulness.

The first essential in any impression is that it should have stability when subjected to stress such as might be employed in mastication. After stability is obtained retention should be considered. The retention of a well designed set of dentures

need only be strong enough to keep each denture in position during functional activities other than mastication. If more than this is attempted in the average difficult case the afterthoughts of the patient and dentist may not be so pleasant to contemplate.

The amount of retention that may be obtained for a full impression may vary from mere adhesion to a marked degree at atmospheric pressure retention that will require definite and forcible efforts to dislodge the finished denture from its seat in the mouth. Should extreme retention be necessary to the successful use of dentures by any patient, then 90 per cent. of the edentulous would be unable to wear artificial appliances at all.

The maximum retention possible for a very favorable case should not be the ideal for all cases. Each case is a law unto itself and the less one is required to compress or displace tissue or extend the impression margins at rest so that functional activity of adjacent tissues is interfered with the more satisfactory the final outcome will be.

Not the least objectionable feature encountered in promising or working for retention without considering muscle and nutritional functioning is the adverse effect produced on the attitude of the patient from loss of retention that occurs from traumatic pressure change or reduced retention when soreness is relieved.

Impression technic may be the cause of loss of retention. This is a certainty. However all failures in retention of dentures are not due to faulty impression technic. The degree of accuracy necessary to make a very satisfactory full denture impression is more susceptible of variation without injurious results than is the degree of accuracy employed in registering central occlusion or in working out a balance in the con-

tact of the opposing teeth in various lateral or protruded occlusions.

When either denture is well retained during speech and displays a fair degree of stability to digital examination when placed in the mouth singly but is dislodged when used with the opposing denture do not seek for the fault in impression technic until you have thoroughly checked the various functional relations of the dentures starting with central occlusion.

The better one works out central occlusion and balance in the articulation of the teeth and perfects these things in the mouth the less will be the necessity for resorting to technic that holds the denture in place against the tipping or dislodging stress of faulty occlusion. Faulty occlusions may on the other hand cause traumatic pressure on the lingual bicuspid region of the mandibular ridge or the palato incisal region of the maxillary arch with subsequent loss of retention.

Afterthoughts point to the flat contradiction of a line of reasoning broadcast some years ago, and still prevalent in the mind of the profession today. This statement implied in substance that if one got the impression right, that it did not matter how careless you were about articulation; the denture would work. This is not only erroneous but it is positively dangerous to the patient as technic necessary to get such a result, temporary as it usually is, may be a cause of marked resorption and sometimes almost complete destruction of the osseous alveolar ridge when it is employed several times in succession in an effort to maintain the "good" fit the patient has been misled to demand.

If you are not inclined to feel that our profession look to the impression as the best avenue to results, recall the crowds and interest displayed in an impression clinic and contrast this with the sparse attendance at

clinics dealing with central occlusion or articulation occurring at the same time.

The permanence of retention of dentures during function and the comfort with which they may be worn if carefully made depends upon visible and invisible factors other than physical characteristics previously discussed.

The visible factors are those that may be found by a visual and digital examination of the mouth. The invisible factors are those within the patient's body or oral tissues, the possible effects of which are not distinguishable for some time after dentures are inserted.

The visible factors may influence one's choice of technic. They determine to a certain degree what a patient may expect of dentures in so far as they favor such mechanical advantage as may simplify the patient's problem of using dentures. The visible factors are however not an absolute guide nor a reliable index for prognosis, especially if the patient is being fitted with a first set of dentures. Promises made to an inexperienced denture patient based on visible factors are an indication of the dentist's good intentions and also of inexperience. No operator should ever promise anything but an honest effort to employ his full skill and experience in treating his patient's case. If he does more than this he is laying himself open to the suspicion of incompetence and loss of valuable time in attempts to make good his promises when the unfavorable unknown factors get in their work and he may arouse in the patient's mind expectations impossible of fulfillment.

To illustrate this let me cite three cases in which the visible factors were favorable. A woman, middle age, teeth lost as a result of pyorrhea and focal infection. The dentures, when inserted, exhibited remarkable retention. The patient was able to

bite pieces out of a hard apple and masticate successfully and comfortably from the moment dentures were fitted. Six weeks later neither denture exhibited a semblance of stability or retention. They were rebased. Eight months later, the same loss of stability and retention was observed. The dentures, rebased again, retained their stability and retention for almost two years when they again required rebasing. The patient has not since appeared for treatment and seems to be comfortable and satisfied.

Second case: a man, twenty-eight, tubercular. Due to extensive caries and some periodontal disease, hospital staff advised extraction of twenty-four teeth. Ten days later patient proceeded to a sanitarium wearing full dentures. The mouth, at time of departure of patient, was too sore to permit tests of retention, which seemed to be moderately good. Two years later patient returned, both dentures exhibited excellent retention and stability to all tests but required some relieving of flange where they were impinging on border tissues. About eighteen months later retention of both dentures still excellent and no soreness was apparent. The facial expression indicated that there had been an extensive loss of alveolar tissue with closing of the bite, in the four years the dentures had been worn.

Case number three: a woman, thirty-eight, full upper denture and bilateral partial lower, supplying four molars. Upper denture is retained to all tests in a most satisfactory and extreme way. Patient complains that the denture constantly dislodges while eating. A test lunch discloses the fact that in mastication this patient crushes food particles by closing in central occlusion and grinds by thrusting the mandible laterally; just the reverse of the usual procedure. No amount of effort or persuasion can induce this patient to try to help herself.

The self critical dentist might blame his impression technic for the good or bad results in these cases, when, in the speaker's opinion, the unknown factors presented by the patient in each case are the cause of the abnormal results obtained.

The visible known factors are:

1.—The visible condition of the tissues that will be used in supporting dentures.

a. State of health, such as presence of inflammation or surface irritation of mucosa, or trauma from extraction.

b. Thickness of mucosa.

2.—Oral secretions.

3.—Form and size of denture base area.

The health of the mucosa at the time of impression making is important. Any irritation in the form of swelling or hypertrophy present in the mouth should be reduced by the use of mild antiseptic washes and rest from an offending denture. A most valuable aid in such procedure is found in the form of Caryl Dakin Solution known as Tri-Chlor when used as a mouth wash every three hours in a solution of 15 drops to a glass of water. When irritation is caused by the dentures being worn, they should be relieved to avoid further irritation from them and they should be worn only at meals for a period of not less than forty-eight hours before impressions are taken. When this is not possible, due to the nature of the activities of an individual, the offending denture or dentures should be temporarily re-based with compound and kept removed from the mouth during periods when their use is not a necessity, until the inflammation is reduced. Failure to observe these precautions has resulted in a loss of retention due to a leak caused by the resolution of the irritated tissue with consequent reduction in thickness.

Irritation due to extraction should be permitted to subside for ten days,

at least, before dentures are constructed. The writer is not one of those who favors insertion of dentures immediately after extraction, as in some instances, this being done where infection was deep seated produced irritation that might have ended disastrously. The only excuse for such a practice is a desire to cater to the wishes of a patient, as against the logic of good surgical procedure of allowing free drainage. Were the mouth not the habitat of many varieties of bacteria, or if denture patients could be relied on to follow instructions, immediate denture insertion might be accomplished without added chance of infecting the osseous ridge tissues and causing subsequent irritation and discomfort.

The most difficult cases the careful technician has to handle are those for which impressions have to be made following extraction. While such conditions do not greatly impede normal procedure the after effects that come from normal reduction of size of the ridges due to healing and regeneration of the traumatized areas produce a reaction on the mental attitude of the patient that will require years of concerted effort to educate the public before it is eradicated. It is an open question in the writer's mind as to what procedure should be followed to give the recent extraction patient the best results and cause the operator the least loss of income through expenditure of time that custom makes it difficult to collect a fee for. While it is not rightly within the scope of the subject of this paper, it is a fact, that from the standpoint of difficulty and after treatment required, the fees for constructing good dentures shortly after extraction should be larger than for constructing dentures for patients who have previously worn them. The trouble that a patient, already run down before teeth are removed, may cause a den-

tist and blame him for, would fill volumes.

It requires about a year and a half for tissues from which teeth have been extracted to assume a normal edentulous ridge state and while reaching this condition much trouble attributed to faulty impressions may occur. Many a conscientious, careful operator has suffered loss of reputation and patronage by failing to recognize this fact and impress it upon his patients or due to failure to get them to believe it, if he did speak of it. The general practitioner should take cognizance of this fact and preach it or do as the practitioner in the country often does, let the patient wait for a year or so before making dentures for them. The writer had yet to see many cases for which impression technic could produce a fairly permanent result when the osseous tissues had not completely regenerated. The trimming off of spines and reduction of the buccal plate in anticipation of future loss of tissue even when conservatively done has had no saving grace when applied to patients past forty, except to eliminate some immediate soreness.

Thickness of healthy mucosa is probably the most important single factor in successful denture construction and the hardest to adequately describe. Not the least function performed by the mucosa is the way in which it adjusts itself to an impression to fill up defects that would permit air to enter under the seated impression as well as a like adjustment to unavoidable slight inaccuracies that usually exist in the fit of the bases of the most carefully constructed dentures.

In so far as retention is concerned the thickness of mucosa on which the peripheral margin of an impression seats seems to determine the degree of retention possible. When the mucosa in this region is of such thickness that it may be indented

about one-half to one mm without pain and when the mucosa covering the alveolar ridge internal to the peripheral region is thin enough to permit the least degree of rotational movement of the impression, we have the ideal condition for maximum retention and stability of a denture.

Impressions of mouth presenting conditions such as described, regardless of ridge form, present few problems for the impression novice. When however, the peripheral tissue presents a break in the continuity of yielding area by the interposition of hard areas, the condition as respects impression technic is quite different.

Excessive soft tissues, especially when located in the mandibular alveolar ridge crest area or when covering most of the anterior third of the maxillary ridge and palate presents a particularly difficult problem, and especially so if the posterior section of the palate is covered by a thin mucosa of drumhead consistency. The presence of much soft tissue on the crest or overlying in folds the lingual margin of the mandibular ridge is also a decided interference with ideal results.

Efforts made in early experience in this field to displace or compress such excessively soft areas or the resorting to surgically removing such areas, have on afterthought been discontinued. Such soft tissue conditions when localized are the result of trauma or cover low grade infection. If radiographic evidence shows infection, such as demonstrated by Colburn and Jackson, is present, it should be removed and with it a sane amount of the soft tissue. When an excessive amount of soft tissue is removed the resulting dense scar is often worse to contend with than the original soft tissue.

Efforts to reduce this tissue by pressure are usually unsuccessful, in fact they supply another type of traumatizing influence that seems to aggravate the trouble and this is es-

pecially so if the soft areas cover infection which the patient declines to have removed.

Impressions should be made so that but slight pressure will be sustained by such areas or they should be relieved, for compressed soft tissues retain their stress resisting form only while pressure is applied to the denture and at other times expand and partly unseat the denture.

It is much better practice to obtain a secure bearing on adjacent hard areas in the palate and on the bucco-labial surface of the alveolar ridge than to attempt to compress soft, flabby or cartilaginous pendant tissues. This idea may with advantage be carried out with extreme cases of omitting relief on the anterior surface of the median palate especially if the alveolar ridges are much resorbed.

The most difficult tissue condition encountered is met with when a thin, hard, drumhead-like mucosa covers the entire denture base area of the mouth and terminates in a mucous membrane pocket between lip and cheek covered by tissues of similar consistency and accompanied by several phrenum-like bundles of dense tissue arising from the peripheral seat area of the ridge in the tuberosity regions, the bicuspid regions of the upper or lower and in the phrenum-lingui and phrenum-labii regions of the lower. Such mouths are usually most easy to treat by using a muscle trimmed approximate fitting tray and plaster. The periphery of the finished denture may have to be made of a velum like rubber called Flex-O-Tite to supply in the flanges of the denture the slight resilience necessary to secure valve seal. In such cases the writer does not hesitate to employ the old vacuum chamber rather large in area and shallow. The scratching of a retention line in the periphery of the maxillary cast about two or three

mm in from the peripheral edge of the impression may help as a last resort.

Scanty or thin saliva usually spells trouble in securing retention, and aggravates the difficulty when accompanying a hard mucosa. In describing the liquids present in the oral cavity some teachers apparently include the mucinous discharge from the tissues of the hard and soft palate. This is not correct. Excessive discharge of mucin from the tissues of the palate is often a very decided interference with the ultimate success on denture retention affecting those dentures under which discharge is observed to occur, and is usually stimulated by the insertion of a new denture. Saliva discharged from the salivary glands rarely causes any trouble except when there is little of it. No successful remedies for overcoming scanty saliva or continued excessive mucin discharge are known to the writer. Fortunately mucin discharge usually ceases if the patient continues to wear the denture. When the mucinous discharge is present in the mouth at the time of impression making it should be carefully swabbed away before the impression is taken and during the process of correction if the correctable technic is employed.

The size of the denture base area is relative to the size of the patient and usually is not a very important factor in impression technic prognosis for this reason. When a very small, flat upper is related to a large lower the problem has to be worked out in the mechanics of denture construction rather than in the impression technic.

The form of the ridge area should be surgically corrected if prominences exist that interfere with peripheral adaptation. In correcting ridge form to permit the best results in impression retention do not advise changes that interfere with aesthetics or that increase difficulties due

to ridge relation in central occlusion, such as cutting away prominent lower ridge with or without teeth is present below. The greatest caution has to be observed in such cases as the subsequent restoration of expression necessary may subject the base area to unnecessary strain if much reduction of tissue occurs.

The invisible factors that ultimately, in the mind of the patient at least, lead to questions concerning impression technic efficiency are:

Invisible irritants within the tissues covered by the denture.

The health and resistance of the patient.

The natural or acquired resistance to pressure of the tissues to be covered by the denture.

Invisible irritants within the tissues that support a denture may be in part disclosed by good radiographs. Such irritants as impacted teeth, pieces of root or particles of broken fillings have caused trouble that was at first attributed to faulty impression technic. The removal of the irritants remedied the trouble.

Infection that is not removed or if removed recurs, accounts for many a sore spot and many cases of lost retention that no impression technic can care for in advance. When continued localized recurrence of irritation or atrophy occurs over a period of months or years despite careful procedure there is little hope that it may be ended without opening up the tissue to find out what is wrong.

The patient who has, by circumstance, been forced to part with teeth decayed and aching but with no periapical infection is a much more favorable case for full denture treatment, both as regards immediate comfort and relative permanence of results after the first year has passed, than the one who has had extensive dental treatment including many root fillings followed

by periapical infection preceding or determining the resort to extraction.

The mothers that some of our patients tell us about who wore one set of dentures for forty years were no doubt in the former class, while the daughter who relates this story is probably telling it because she is in the latter class.

Experiences with these two classes of patients may give the general practitioner much food for thought as to whether he should jeopardize the patient's health and future comfort with artificial dentures by treating and retaining doubtful teeth in an unfavorable environment.

Ill health and lowered resistance of a patient should be an index to warn you against efforts to produce great retention. The best that can be done for sufferers from chronic, systemic disease is to reconstruct the dentures when irritation requires, avoiding any procedure that might cause traumatizing pressure.

The resistance to change under pressure of the tissues covered by a denture may be very slight in patients who have worn ill fitting dentures for many years. The increased pressure placed upon supporting tissues by the increased use a patient can give well made dentures sometimes stimulates a resorption that causes looseness or loss of retention in a few months. When this occurs do not think that the impression is entirely to blame. You may be surprised to find that a second set of new dentures will continue to function for a long time when made in exactly the same way as the first ones. The only way to account for the repeated occurrence of such experiences is to credit the tissues with acquiring a resistance to the increased use they are put to in the interval that the first dentures are worn. Care in impression technic may help to reduce such cases but no amount of care can eliminate them entirely.

When we review the many causes for loss of retention which the writer believes have been commonly laid at the door of impression technic, in the disappointment that followed their pernicious effects, we should be urged to apply rational procedure to impression technic. We will not act amiss if we proceed always with the feeling that the less stress we create on tissues from any cause the more permanent will be our results.

Technic that may yield impressive results of a qualified permanent character in one case may be productive of rapid destructive change in another. The same method or procedure is to adopt a technic that will be productive of the least inequality of pressure on the stress bearing tissues. Spectacular results in impression technic are usually the result of a procedure that produces unnecessary pressure on the soft mucosa, especially on the palate tissues of the maxillary arch. After many experiments with methods that promised the conservation of time over the usual muscle trimmed impression in compound, the writer still feels that the choice of those who used an approximately fitting tray filled with a thin layer of soft compound, rather than a hard mass of compound, the surface of which is heated, was wise, whether by chance or intent. The results obtained with the former technic are not so spectacular always as those obtained by the latter, but the results in the mouth are more likely to continue to meet the requirements after several months or years. In addition, no false expectations, impossible of continued fulfillment, are aroused in the patient's mind. Whether the impressions are made in compound or plaster, the results recounted lead to the conclusion that an approximate fitting tray filled with a small amount of plastic material will produce the most permanent results.

Some new materials, produced by one of the oldest manufacturers of compound for impressions, The Detroit Dental Manufacturing Company, have been found of considerable value. A new soft tracing stick, identified by a green color, is used for correcting defects, building up the margins of impressions to produce valve seal and to prepare for muscle trimming. It is soft enough to trim readily without undue heating to obviate some of the danger of producing too great pressure on the bucco labial periphery, a frequent error in the use of the regular tracing stick. A second material made available from the same source is a maroon colored compound setting harder than the regular variety, which used either straight or mixed with the regular, sets hard enough to retain its shape at mouth temperature during tracing or muscle trimming without tedious cooling precautions.

The writer continues to find compound, correctable, impressions the most satisfactory for the majority of his impression work as this technic lends itself best to special treatment of varying tissue depth frequently found to be the cause of difficulty in securing retention. It also resists admixture with saliva, an advantage appreciated by those who take time to use it properly when dealing with the mandibular ridge. Plaster has its place, particularly when impressions of hard surfaces are to be made. Here it is the most satisfactory and especially so in the construction of removable and fixed bridges.

Whenever appliances are constructed to be supported by the mucosa, compound is the best material. When clasps are employed as retainers compound may be used in conjunction with plaster which is employed to take impressions of the teeth to be clasped.

In recapitulation:

There are many factors that may cause loss of retention of dentures that are not traceable to impression technic.

The use of tight fitting impressions as a means of avoiding the labor of securing correct centric and other occlusions in the finished dentures is a snare and a delusion.

Impressions should be obtained with the least pressure possible and consistent with securing adaptation of the material to the mucosa.

Instead of trying to create stability of dentures by compressing soft tissues to a degree of rigidity sufficient to afford a firm foundation re-

lieve pressure on the soft areas and secure stability by getting bearing of the impression on adjacent hard areas.

Do not overlook the fact that after extraction the alveolar ridge tissues usually continue to wash away for a year and a half causing in the meantime much annoyance to the patient which the dentist should not feel obliged to continue to treat without compensation.

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This paper was also read before the Chicago Dental Society, January, 1927.

Diagnosis

A. D. A. MASON, D.D.S.

Read before the Ottawa Dental Society.

The most tiring part of the Diagnostician's day, or that which saps the energy of the Operator in the course of a busy day, is the deciding of what should be done in the various cases which come under his observation. It is the making of a diagnosis that sends the Practitioner home at night, with nerves ragged and on edge, and his usual placid and contented disposition soured and chilled.

The same clear thought that must lead to a definite decision, the final observation that peers into the future, the certainty and celerity with which he must adapt himself to the complexities of the moment, whether it affects a huge business deal involving thousands, or solves itself down to the extraction of an individual tooth.

What is Diagnosis?—The placing of values on great trifles, taking as your foundation the consideration of small

details, and building up from this groundwork of minor things, a history and an analysis, that is clear, concise and definite.

The Dental Diagnostician of the past, in making a diagnosis has kept his mind and his energies centered too much on the actual cavity or tooth directly involved, and has not been concerned in the broader field of observation—the systemic condition of the patient, or even of the surrounding parts.

The Physician has, however, on the other hand made his diagnosis from a consideration of general systemic conditions, and consequently has ignored the local symptoms, therefore it is quite clear—in diagnosis and consultation, the Medical and Dental Practitioners are not on common ground.

It is always wise to avoid passing fads and fancies, too many men nowadays will drift with the tide, and be

carried away by some popular idea of the moment, and in consequence, will naturally force all their diagnoses cases into that particular channel.

Specialists in Dentistry—In Exodontia, X-Ray, Orthodontia and Periodontia, are therefore inclined to place a case in their own particular group, and for that specific reason I wish for greater co-ordination and co-operation between General Practitioners, and the Specialists.

The general practitioner usually has a greater knowledge of the conditions as the patient will invariably reveal more to him than to a Specialist.

What does the patient expect from the General Practitioner; he desires a diagnosis of his condition which will prevent more serious ailments at a later date. For example a child of twelve with an extreme overbite, should be told what will happen to the mouth at the age of forty-five. In other words if the traumatic condition is allowed to proceed from the age of twelve, we know that this patient will be treated for Periclasia at forty.

As focal infection is playing such an important part at the present time, it is vitally essential that the dentist should foresee such possible conditions, and insist upon periodical examinations of the mouth, and see that repairs to carious teeth are carried out before the cavities have developed to any extent, as this is most obviously the easiest way to prevent focal infection. It is therefore, most essential that strict attention should be paid to small cavities, and that they are filled immediately.

The patient, most assuredly, has certain claims upon the dentist, he demands an unhurried and unworried mind, a mind not concerned with his own individual cares and perplexities, but free to make a clear diagnosis, therefore, considerable time and thought must be expended to produce results worth while, and this of

course necessitates a fee worthy of the effort.

History must always be taken into consideration. Hereditary diseases such as Tuberculosis, Syphilis, weak-resistances, or any of the other systemic complaints, must be noted, as these will always influence us in our treatment.

History of contracted diseases such as Neuritis, Arthritis, and Anaemia, always have a direct bearing on the prognosis of a case. The age of the patient also is very important, similar conditions in children, adults and people of old age will be treated entirely different.

Habits, diets, and metabolism of the patient always have a profound and direct bearing on the treatment, and must therefore be taken into consideration when making a diagnosis. Also certain Physiological conditions of the patient have a general bearing on our rendering of a diagnosis; such as pregnancy, change of life, or advanced age either in the male or female.

In addition to the above, local conditions must not be overlooked, mucous tissues, muscular tissues of the mouth, tongue, cheek and lips, tonsils and throat, (not with the idea of treating for tonsils), but they all have a clearly defined and definite part to play in the making of our diagnosis. Now we pay attention to the enamel, dentine pericemental membrane, and have reached the local symptoms which seem always to be overlooked by the physician.

The apical areas of the roots must be examined by means of X-Ray, transillumination, and the testing of the pulp for vitality both by thermal and electric tests.

The greatest help in this local examination, is possibly an abundance of light, and this should be obtained by using in our offices the daylight bulbs, which give us the daylight ray. Headlights, which throw the ray di-

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The Treatment of Periodontoclasia (Pyorrhea)

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Periodontoclasia means a breaking down of the investing or supporting tissues of the teeth. The name is an excellent one because that is exactly what the disease is, a break in health of these structures. Health may be defined as a condition in which the cells, tissues, and organs are in proper function. Note the three elements involved—cells, tissues, and organs. In other words, periodontoclasia means that somewhere in the cells, tissues, and organs of the masticatory apparatus that there are failures in function. Treatment must be directed to discovering the causes of these failures in function of cells, tissues, or organs, and in eliminating the causes, in other words, re-establishing proper function. With such a conception in mind it is easy to see why treatment of this disease in the past has been so unsatisfactory. If the dentist has but one idea as to the cause of the disease his treatment will be correspondingly inadequate. Some improvement may follow the treatment of any single factor because the cells, tissues, and organs all have some reserve power and are able to function if given half a chance. Removal of one morbid factor may be enough to tip the scale toward improvement. But in most cases no lasting benefit results from such treatment. Periodontal attachments weakened by pocket formation and bone loss are at such a disadvantage because of mechanical leverage that the best of treatments is none too good to insure future health. Every possible factor causing or tend-

ing to cause disease must be discovered and eliminated.

The causes of failure in function of cells are first insufficient blood supply, second a lack of certain necessary food constituents in the blood, third the presence of toxins or poisonous constituents in the blood, fourth the accumulation of waste products around the cell and fifth the presence of injurious agents about the cell such as bacteria or mechanical or chemical irritation. A faulty blood supply may be a systemic condition but usually it is local. In many individuals the periodontal tissues are thin and frail because of lack of use during the developmental period. Tissues and organs grow and develop largely depending on their blood supply which in turn depends on the exercise or use of the tissue and organ. Heavy bone develops depending on the stresses on it, heavy ridges for powerful muscle attachments, heavy alveolar process for vigorously used teeth. The gingival tissues are cushions to protect the periodontal or supporting tissues from the injuries of masticating coarse food. These tissues are kept in vigorous circulation by the massage which such food vigorously chewed brings to bear on them. The pericementum is a ligament wonderfully constructed to give elasticity to the tooth and to resist the movements to which it is subjected. The health depends on its circulation of blood which in turn depends on the usage which the tooth gets. Injurious stress may cause degenerative changes to

occur in which the blood vessels partially close as shown by Box. Or teeth may shift together from loss of contact and the gingival periodontal tissues between shrink away by pressure atrophy. Or the presence of bacteria against the tissue and penetrating into it may cause inflammatory changes leading to faulty circulation. Whatever the cause of faulty circulation, whether developmental failure, lack of use, excessive stress, atrophic changes or inflammation, the first essential in the treatment of periodontoclasia is to establish a vigorous circulation in the periodontal tissues. For the most part this is done by gingival massage and by training of the patient in proper masticatory function. Where injurious stresses occur these must be relieved temporarily by grinding pending the re-establishment of function to the masticatory machine as a whole.

The second cause of failure in cell function is faulty food supply to the cells. The periodontal cells are no different from other cells in the body in their needs. They differ only in that they are constantly in the presence of bacteria whose effort is to penetrate and grow in the tissue. It is the function of bacteria to break down organic tissue while it is a function of tissue cells to withstand them. There is more or less infection at the base of practically all gingival crevices as shown by Gottlieb; in other words, a constant struggle is occurring between the invading microorganisms and the tissue cells. Because of this any disability to the tissue cells of the body on account of faults in nutrition or metabolism is shown more quickly in the gingival periodontal tissues than anywhere else in the body. Lowered resistance leads immediately to increased gingival invasion by bacteria with resulting symptoms of inflammation. Because any dietetic or metabolic error reflects itself more quickly in these tis-

sues than any other the dentist should be the first one to note a break in systemic cell resistance, to inquire into it, and to take steps for the correction. The common errors in diet are due to excessive eating especially of protein food, insufficient indigestible bulk or residue, insufficient calcium, insufficient fat soluble vitamins and insufficient antiscorbutic vitamin. It is absolutely necessary in the thorough treatment of any case of periodontoclasia to know that the diet is adequate. Since the average physician is just as ignorant of the needs of the body from a nutritional standpoint as the dentist, there is little to be gained by referring patients to ordinary physicians for dietetic advice. The dentist must train himself to determine dietary faults and to correct them. Fortunately it is not as difficult as it sounds. The good work of Dean Seccombe here in preparing his tables of foods and his daily diet charts has made it possible for the dentist or dental assistant with comparatively little training to determine without an excessive expenditure of time just where the diet errs from the normal and proper. The only criticism to be offered of the table is that the vitamin values of the foods listed are not given. This is, however, not so serious as it sounds for if the diet contains considerable butter and leafy vegetables it is probably adequate in fat soluble vitamins, while if it contains considerable fresh raw leafy vegetables and acid fruits like oranges or tomatoes it is undoubtedly adequate in the antiscorbutic. If these food elements are not abundant in the diet it is inadequate.

Armed with the study of dietary errors of the patient it is possible to help greatly in the control and treatment of periodontoclasia but more than that, in the prevention or relief of many other symptoms of faulty bodily function which if unrelieved would soon lead to incapacity, invalidism and premature death. The

dentist is a most important factor in health service because he gets the cases when physical breakdown is just beginning. If he is able to function by analyzing and correcting the dietary errors which bring so many people to an untimely grave he will increase his service to humanity by many fold. Disease of the periodontal tissues is one of the first symptoms of nutritional defect. The dentist must recognize nutritional defects always as a possible cause of periodontoclasia and his treatment must be devoted to ascertaining and correcting it just as certainly as any other cause.

A third reason for faulty cell function is the presence in the blood of products which are injurious to tissue cells. Excessive sugar in the blood in diabetes, uric acid, in nephritis, mercury poisoning, toxic products from constipation, syphilis, tuberculosis, cancer or other systemic disease all have their depressing effect on the periodontal tissues and increase bacterial invasion in them. In many cases local treatment is fruitless of results because of worry or some of these systemic diseases which prevent recovery by the tissue cells. It is necessary to know that the cells are not being poisoned in these ways. For this purpose the physician proves much more valuable although even here he may let most important facts escape him. It is not uncommon to have patients whose health is especially broken from constipation who have been in the hands of even eminent physicians for years without effort made at correction. The dentist must study dietetics and the rules of hygiene until he can direct his patients. Physicians as a group are far behind the dentists in their knowledge and thinking in prevention. The dentist must find out himself about constipation and must be able to direct its correction. By means of dietary changes including reduction of food to body requirements, great increase in the proportion of cellulose contain-

ing foods, attention to regular body habits, abundant use of water before meals and properly regulated exercise, there are few cases that cannot be helped without drugs or oils. For the discovery and correction of diabetes, nephritis, syphilis and other such diseases a physical examination by a physician is necessary and should be performed as a routine in cases of marked periodontoclasia. Much can be learned by the dentist from the patient by intelligent questioning regarding systemic conditions, but wherever possible this should be supplemented by an adequate physical examination by a physician.

The fourth cause of faulty cell and tissue function of the periodontal tissues is the presence of bacteria or of mechanical or chemical irritants in contact with them. It is in this field that the periodontists have done their best work. The removal of bacteria and calculus from the teeth, the delicate shaving of the cementum surface, the repair of faulty contacts which allowed food to impinge and remain, the removal of rough edges of enamel, fillings or crowns, have been dealt with by Carr and many others many years back. Yet it is necessary to re-emphasize the necessity for perfection in technic in this work. Unless calculus is removed completely from the root surface the adjacent soft tissues will not heal, more calculus will form and the disease process will progress.

At present there are two schools of thought in the local treatment of the periodontal tissues. The one depends on exquisite accuracy of technic to remove all subgingival calculus, and to shave the cementum just to a polish and no more. By adequate home care the teeth are kept free from masses of bacteria and the gingival tissues are massaged by which the circulation is restored, the surrounding connective tissues tighten and bind the gingiva to the root and a healthy epithelium lines the pocket.

This epithelium may attach itself to the cementum thus obliterating the pocket. Some shrinkage of the gingiva occurs but not much.

The second school believes that it is better to remove the diseased gingival flap to a point where a normally deep gingival crevice can remain. There are three methods of getting this result. The first consists of a frank resection of the gingiva. Under a local anesthetic the depth of the gingival crevice is ascertained and the gingiva resected to that level by means of properly shaped knives and tissue forceps. If borders of alveolar bone stick up they are ground off slightly below the level of the soft tissue. The raw shelf of gingiva may be left uncovered to heal or it may be superficially cauterized with silver nitrate and covered with paraffin for a few days. When healing occurs new tissue heaps around the tooth for a considerable distance to re-establish a gingival crevice. This new tissue is vigorous and free from infection and leaves a very healthy result. It has to be watched, however, as points of granulation tissue tend to form which interfere with a smooth result. These must be cauterized away as they occur. There are two scientific objections to the method. The first is that it leaves more root surface here than is necessary by other methods and second that it is unnecessarily uncomfortable to the patient. To many patients the raw surface and edge of bone are agonizingly painful for many days and the complete treatment of the mouth is a distinct drain on their vitality.

The second method of getting rid of the diseased gingival flap is the Berger operation. Under local anesthesia the interdental gingiva is cut over an area and the labial or buccal gingiva stripped down exposing the roots and alveolar bone. With curets the rarefied bone edge is smoothed and all granulation tissue masses are curetted out. The gingiva is then laid

back, trimmed wherever necessary and stitched into place thus obliterating all gingival flaps. The method has an advantage over the resection method in that no raw surface is left uncovered and is comparatively painless. It is even more drastic in tissue removal, however, as tissue is removed to the bone level—a point way below where regeneration could be expected to occur. And the heaping up of tissue seen after the resection operation, by which a considerable restoration of the resected tissue occurs, can not be expected following the Berger operation.

The third type of removal of the gingival flap depends on pressure atrophy. The pocket is packed by a loose rope of cotton in which an antiseptic cement is incorporated such as Temp's cement, Carbol Eugenol, or Sterident. It is tucked to the base of the pocket with a thin flat burnisher and the pocket filled around the tooth until the gingiva is mildly blanched. This is left for twenty-four hours and removed after which medicated paraffin wax is inserted to where blanching just begins again. The wax is retained by forcing it between the teeth and flattening it on the lingual side. This treatment is repeated and about the fourth day the gingiva turns out and now tissue grows up from the base of the crevice. It may now be left to shrink down by itself to a new line about the root. In all these methods calculus is scaled from the roots at the time when the roots are exposed to direct vision. The value of the pocket packing method lies in the freedom from raw cut surfaces and in its painlessness and also in the considerable rebuilding of gingival tissue. Of the three methods of removing gingival tissue where it is necessary this method appeals to me the most.

A periclasial pocket is a crevice lined on one side by cementum, the outer surface of which contains necrotic connective tissue, fiber ends,

and by calculus, that is, rough masses of calcareous matter containing innumerable bacteria. The gingival side of the pocket is covered by degenerated epithelium broken here and there, underneath which is a granulomatous mass. By means of apox-esis, that is the fine scaling and root surface finishing, followed by home care and massage the root surface is left in so polished a condition so free from bacteria that the tissues can lie against the root without irritation. The massage restores circulation so that bacteria in the tissue are eliminated and the gingival flap becomes healthy and may even reattach to the root as shown by McCall and Box histologically and by many periodontists clinically. By this means the maximum amount of root covering is retained.

The cementum is extremely thin in the cervical portion of the root and very little shaving is necessary. If the cementum is as thick as an ordinary human hair as shown by Box, one tenth of this shaved away is enough. Too deep shaving cuts through the cementum into the very porous outer portion of dentin, leaving a sensitive root surface which is never free from bacterial growth. Shaving to the point where the cementum feels like polished ivory when examined with a No. 18 explorer is the proper amount. The further the pocket extends toward the apex the less possible is it to leave the cementum like this, for the cementum toward the apex and in the bifurcations is very cellular and it is impossible in many cases to prepare a polished surface. To get to the bottom of all pockets, to scale off all calculus perfectly and to leave a polished cementum throughout is a very nice technic. Outside of the few who devote themselves almost exclusively to it, probably very few dentists do it adequately. It is a matter of educating the fingers to distinguish between the sensations encountered as the scaler or explorer

passes over the root surface. Many large instrument sets are on the market for the work, but an elaborate set is really unnecessary. Good work is being done with many different kinds of instruments and a good operator can usually do everything possible with a dozen to twenty carefully chosen instruments.

It is not possible to render all root surfaces free of irritation to the surrounding tissues. Teeth vary in their structure and a set of teeth will occasionally be encountered in which it is impossible to get the cementum polished. Absorption areas in the root will sometimes be involved in the pockets. And no one is one hundred per cent. accurate in removing calculus without cutting through the cementum. For all these reasons areas will be found where pockets do not heal. The gingival flap refuses to reattach or even to bind tightly against the root. Such pockets should be packed until the gingiva has receded to a point where it can remain bound tightly on the root.

The role of the epithelium in the gingival crevice is coming in for much study lately. As the tooth erupts and comes in contact with the oral epithelium a downward growth of oral epithelium occurs toward the amelo cemental junction. The epithelial cells lying against the enamel gradually hornify and remain attached to the enamel after eruption as Nasmyth's membrane. This hornified membrane was formerly thought to come from the enamel organ but it is now known that the last vestiges of the enamel organ become calcified on the periphery of the enamel rods and are thus invisible in ordinary tooth sections because decalcified away with the enamel. This idea that the oral epithelium lying against the enamel or cementum forms a hornified layer which glues itself to the tooth surface and remains on the tooth surface as a permanent structure is due to the work of Gottlieb and his students.

It explains a number of points in periodontia. As age advances the epithelium grows down along the cementum. The base of the gingival crevice is normally a constantly advancing line. Shortly after eruption it is high on the enamel—later it advances to the amelo cemental junction and in old age it is down on the cementum. It remains no longer at the amelo cemental junction than at any other point. What causes the epithelium to advance down the cementum followed by an advancing line of base of the crevice and gradual resection of the gingiva is at present unknown. It may be the irritating effect of the mild inflammation found at the base of the crevice in practically all mouths and teeth.

In periodontoclasia there is usually a great extension of the epithelium along the cementum whether or not pocket formation keeps up with it. Periclasial pockets are lined to the base with epithelium, with only here and there a break where the connective tissue comes to the surface. Apoxesis leaves a deep crevice lined with epithelium and the only attachment that can occur is that of the epithelium gluing itself to the tooth surface with a thin layer of horn. Thus we can not expect a new attachment of connective tissue fibers into the cementum formerly involved in a pocket, nor can we expect the bony crest to grow up further than the point where pericementum ends and epithelial attachment begins.

To overcome this difficulty of having a layer of epithelium interposed between the cementum and the connective tissue of the gingiva which might conceivably attach itself to the cementum as normal pericementum were the epithelium not in the way, Dr. J. O. McCall has attempted to destroy the epithelium lining the pocket by means of sodium sulphite. This solution is used as the active principle of most depilatories because of its softening effect on keratin of hair or

skin. After scaling the subgingival calculus and shaving the root surface the pocket is flooded with sodium sulphite solution, allowed to stand a minute, and then curetted gently on the gingival surface to peel out all the disintegrated epithelium. Whether this will prove to be of real value I am not yet ready to say. So far there is very little evidence in former periclasial pockets of reattachment of normal pericementum by means of new layers of cementum laid on by cemento blasts, this being the method by which such reattachment must occur. In one case shown histologically by Box, in which the connective tissue lies in contact with the cementum where formerly a periclasial pocket existed, the fibers run along the root not into it. The connective tissue apparently forms a capsule not an insertion. There is therefore very little reason to think that in pockets of some standing where the cementum can be none other than dead that a reattachment of pericementum can be made to occur. If the pericementum is destroyed half way down the tooth it may be possible to obliterate the remaining pockets, but from the standpoint of support the root has lost half of its attachment for all time.

Teeth in which the attachment is lost all around more than half way to the apex should be extracted at once. So should teeth on which pockets extend to the apex of the root. Experience shows that teeth which have such extremely deep pockets practically never can be kept in health. Similarly loose teeth on which apical absorption has occurred should be extracted. Much can be done in the treatment of periodontoclasia on teeth in which the disease has not advanced too far, but there are limitations. Since the knowledge about focal infection has required that no chronic inflammatory focus be left deep around the dental structures, periodontists are taking less

chances than formerly with doubtful teeth.

In this discussion so far one very large factor has remained untouched. That is the subject of traumatic occlusion. Traumatic occlusion means a break in function of the masticatory machine. The jaws and teeth, with attached muscles and ligaments, are a wonderfully constructed machine for their purpose. The mechanical arrangement of the structures under normal conditions is a joy to the engineer who examines them. But unfortunately in the present day and generation of soft devitalized food, racial intermixture, etc., the majority of masticatory machines are not normal and many are not functioning at all. Fortunately the tissues adjust to developmental faults and usually compensations occur which maintain health. Thus with no other factors operating a simple irregularity of the teeth even though pronounced would not lead to traumatic occlusion or to periodontoclasia. Most of the traumatic occlusion comes from one of two things: first, a changing relation of the teeth to each other, and second, some vicious mouth habit. When teeth are extracted the other teeth shift, the jaws settle together and certain teeth become locked. The lines of force on the teeth are no longer in line with the long axes of the teeth and lateral stresses occur. Teeth subjected to such occlusal trauma develop degenerative and circulatory changes in the pericementum, gingiva and alveolar process which are profound. Occasionally teeth will be found in which there is very great mobility, possibly with apical absorption, because of it yet with no pocket formation. Usually infection causes deep pockets in such damaged periodontal tissue.

The treatment for traumatic occlusion is not grinding except as a very temporary relief. Grinding may relieve the locking but it does not restore the mechanical balance neces-

sary for normal function. Experience with grinding shows that first one tooth and then another shows the effect of occlusal trauma. There have to be frequent treatments and the end results are not satisfactory. When teeth are subjected to occlusal trauma, the periodontal tissues become damaged and it is necessary if the teeth are to be saved that the mechanical relationships be brought nearly to the ideal. Mechanical faults occurring during the developmental period which were compensated for before periodontoclasia occurred can no longer be tolerated because of the weakened bony support to the teeth. The ideal relationship is one in which the occlusal surfaces of the mouth are so adjusted to each other that within the normal range of masticatory excursion all the teeth remain in contact with their antagonists all the time. It is what is known in prosthodontia as balanced occlusion. If the bite is closed it must be opened in order to bring the force of occlusion in line with the axes of most of the teeth, in order to give proper tension to the tissues of face and throat, in order to bring the condyle of the mandible away from the tympanic plate and thus relieve deafness and in order to give room for the tongue and make swallowing and salivary drainage of the mouth normal.

In order to bring a mouth in which many teeth are loosened, many shifted in their position, several lost and the bite closed with the mandible retracted, to anything approaching an ideal mechanical relation is a problem in reconstruction. The steps in the process consist of making accurate models of the teeth and setting them up on an anatomical articulator by means of face bow and cheek bites. For this work the Monson anatomical articulator and method are the most satisfactory. A model of the reconstruction work is then built in clay or wax on the plaster models which can serve as a guide in the reconstruction

of the case. If the bite must be opened considerably and the mandible shifted forward it is better to do this by means of splints, that is, metal castings of the occlusal surfaces cemented over the lower molars and bicuspids and so designed as to open the bite the proper amount and to force the mandible to the desired position in order to be comfortable. If much change is needed it can be accomplished in several stages so that at no time must the patient adjust to a position so different from the habitual one as to cause discomfort. When the patient is habituated to the new position the permanent restoration can be built in.

Orthodontia is coming to be used more and more for these cases. In many instances it is the only means by which a tooth may be adjusted so that it can be brought into function with the force directed along its long axis. Many times a simple expansion of the arch by tipping up lower teeth having lingual inclination is sufficient to open the bite all that is necessary. Furthermore, such orthodontia for adults with broken down mouths can be done and is being done successfully by many operators of the present time.

There are several factors which limit very considerably what can be done in building up to a balanced relationship and proper spacing of the jaws. One of these is the increased leverage which is put upon the teeth when they are built up. Many cases will require an occlusal extension of nearly a quarter of an inch on certain teeth. If half the bony support is lost on such a tooth this extension to the crown means a great increase in the force which lateral masticatory movements bring on the alveolar crests. In the second place an opening of the bite to a near end to end relationship of the anterior teeth would frequently cause a very bad esthetic result. The bite should never be opened further than the point of most perfect facial proportion. Thirdly, patients

cannot become accustomed to too great a change in relationship. Permanent restorations should not be inserted until the patient is adjusted on the metal splint. It is very easy to overdo this work and render patients permanently uncomfortable. Fourthly, many patients have nervous habits with their jaws which must be recognized and taken into account. If jaw relations are so changed that these habits cannot be performed they are permanently uncomfortable. A compromise must be made between what the patient is used to and ideal mechanical relations.

The results of such reconstruction work are most gratifying. The effects on digestion, on hearing, on nervousness, of a closed bite and locked occlusion besides those on the periodontal tissues are much more serious than most dentists have any idea of. The relief which comes of building up to proper jaw relations and balanced occlusion is correspondingly great. But even the most enthusiastic advocates of this work admit that it is easy to go too far with it. They all have cases in which they wish they had not opened so far.

In my opinion the restoration method is the one to use in cases of traumatic occlusion. By it a mechanically ideal or at least greatly improved mechanical condition can result which reduces the stresses on the teeth to the minimum. This cannot be done by grinding which only relieves one tooth by increasing the strain on others. When the bite is closed by loss of teeth or occlusal wear a mechanical fault is present which interferes with function and can only be corrected by opening and establishing favorable mechanical conditions.

Occlusal trauma is frequently induced by vicious occlusal habits. Locking the jaws at night, grinding the teeth at night, locking and unlocking the jaws continuously throughout the day, biting far out or

some interfering cusp, thread biting, and many others lead to destruction of the periodontium on the affected teeth. The treatment of these conditions is difficult and must be handled according to the condition and patient. Some habits the patient can correct by effort. Others must be corrected by mechanical interference. The difficulty usually is to discover the habit that is causing the trouble.

To sum up, the treatment of periodontoclasia is a matter of finding the causes of faulty function in the cells, tissues, and organs of the masticatory apparatus and of eliminating these causes. The circulation must be rendered vigorous through these tissues by brush and finger massage and by thorough mastication of coarse food; the systemic causes of low cell vitality must be corrected by regulating the diet, elimination, and other hygienic factors and by correcting any systemic disease; the root surfaces must be rendered practically bacteria free by accurate scaling of all calculus and polishing of the root surface; the mouth must be made and kept sanitary by eliminating edges and crevices for bacterial lodgment and by regular accurate home care: gingival flaps that cannot be made to attach to or hug the root surface should be removed by pocket packing or by resection; and the masticatory apparatus should be restored to support tipped teeth, to close open contacts, to give proper jaw relationships and to give as perfectly balanced occlusion as possible under the limiting conditions incidental to the case.

I want to voice a protest against the superstitious acceptance by dentists of therapeutic agents for which there is no rational basis. It may be possible that Mercitan or ultra violet rays or Inava vaccine do help the tissues to rid themselves of bacteria when everything else is done. Our chief recourse for this is to raise systemic resistance throughout and to stimulate circulation by massage.

Perhaps some of these agents will help in this work. Certainly ultra violet therapy is helpful in allaying pain after resection. But unless the dentist knows what he is dealing with, has a diagnosis by which all the causes of faulty function in the periodontal cells and tissues and in the masticatory machine itself are discovered, and then proceeds to eliminate these causes one by one and place all parts in the most ideal function possible, he is simply treating symptoms and not the disease itself. The expectation that injections of Inava vaccine or applications of ultra violet light or Mercitan are going to cure periodontoclasia in a patient on a faulty diet, who is constipated, perhaps has diabetes, has never really chewed his food, nor cared adequately for his mouth, and whose teeth are shifted about, the bite partly closed and with deep pockets and subgingival calculus about all teeth, is absolutely ridiculous. Nor is the expectation of accomplishing the result by surgical resection much better. We as dentists must get a broader outlook and more fundamental understanding so that we are not taken in by every novel fad or patent medicine vendor that comes along with a string of testimonials. We are health service workers in the field of dentistry. We must think of our work as restoring and maintaining health in the mouth with all that this involves. This is a long step from the conception of the average dentist who is thinking in terms of giving treatments of one kind or another for pyorrhea at so much per treatment, or of making restorations at so much per filling. There is more to dentistry than most of us ever dream of. A dentist with the proper vision of his service and with a convincing personality could take the patients from the average dentist after they are supposedly completed and find and do more necessary work for them than their dentist

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SOCIETIES

Canadian Dental Association Constitution

(Held over from October Issue)

(b) In those provinces where there is no province-wide voluntary organization, the delegates shall be appointed by the Provincial Legal Association, unless this power be delegated by the Provincial Association to some other body.

Section 2. The Board of Delegates shall meet at least one day previous to the opening of the meeting of the Association, and thereafter while the Association is in session, the Board of Delegates may meet daily. During the interval between the meetings, the Board of Delegates shall meet at the call of the Executive Council.

Section 3. For all the meetings of the Board of Delegates, due notice shall be sent to each member, stating the business of the meeting.

Section 4. The Board of Delegates shall have supervision of all properties and of all financial affairs of the Association. It shall, through its officers, conduct all the business and correspondence. It shall keep a record of the transactions of all its meetings and of the receipts and expenditure of all funds, and shall report upon same in journals after the meetings. In case of a vacancy in any office, on account of death or otherwise, during the interval between the meetings of the Association, it shall have the power to appoint successors. Before the close of each meeting, it shall elect a President-Elect and if possible select a place for the next meeting and present a list of all standing and special committees and the members thereof.

Section 5. In order that the business of the Association may be facilitated during the interval between the meetings, the Board of Delegates shall appoint a Committee of five from among its members, which shall be known as the Executive Committee, and the Chairman of the Board of Delegates shall be the Chairman of the Committee. In all the business affairs of the Association, it shall represent

the Board of Delegates, and to it shall be delegated all the rights and powers of the Board of Delegates. The President and President Elect shall be ex-officio members of the Committee. The Executive Committee shall report to the Board of Delegates at the meeting and at such other times as the Chairman of the Board of Delegates may request. The Chairman of the Board of Delegates at the request of five members of the Board of Delegates may call a special meeting at any time, at which the Executive Committee may be annulled or changed, and for such other purposes as are intimated in notice of meeting.

Section 6. The Executive Committee may, if necessary, refer important questions for mail ballot to the Board of Delegates.

CHAPTER 8. COMMITTEES.

Standing Committees. The Standing Committees shall be as follows:—

- (1) A Committee on Arrangements.
- (2) A Committee on Dental Legislation.
- (3) A Committee on Dental Health.
- (4) A Committee on Research.
- (5) A Committee on Inter-Provincial and Foreign Relations.
- (6) A Committee on Programme.
- (7) A Committee on Dental Education.

The Committee of Arrangements shall consist of five members, who shall be residents of the place in which the meeting is to be held. The President shall select two who will select the other three. The Committee shall select its own chairman.

The Committee shall be required to provide for transportation and the necessary accommodation for the meeting.

The General Secretary shall act in an advisory capacity to the committee.

The Committee shall have power to add to its members.

Committee on Legislation. To the Committee on Legislation shall be

referred all matters pertaining to local and federal Dental Acts.

Committee on Dental Health. It shall be the duty of this Committee to place itself in communication with the Federal Department of Health, and with the various affiliated societies, and where none exist with the prominent men of the profession, seeking information regarding public health, and to present a report embodying anything in regard thereto that would be of interest.

The Committee on Research. The Committee on Research will take charge of all research work under the general direction of the Executive Council when required. The Committee shall have power to add to its members and to name its own executive.

The Committee on Interprovincial and Foreign Relations. It is the duty of the Committee on Intra-Canadian Relations to endeavor to promote in the different provinces of the Dominion a better understanding of the other's problems, thus making for a greater bond of sympathy, and a stronger feeling of unity and co-operation among the members of the profession throughout the Dominion.

The Committee on Programme. It shall be the duty of the Committee on Programme to secure speakers, essayists, clinics, and exhibits for the general meeting, and report from time to time to the general secretary, who will have the programme arranged, published and distributed to the profession.

Committee on Dental Education. To the Committee on Dental Education shall be referred all matters pertaining to Dental Colleges and Dental Education.

Special Committees. Special Committees may, from time to time, be appointed by the President, the Council, or by the Executive Committee. They shall select their own chairman, and shall perform the duties for which they are called into existence.

ADDRESSES AND PUBLICATIONS.

Section 1. All addresses delivered at a meeting shall immediately become the property of the Association, to be published or not, in whole or in part, as deemed advisable by the Executive Committee.

Section 2. All papers, essays, photographs, diagrams, etc., presented in any section, shall become the property of the Association, to be published or not, as determined by the Executive Committee, and they shall not be otherwise published except with the

consent of the Executive Committee.

Section 3. Each author of a paper read before any section shall, as soon as it has been read, hand it with any accompanying diagrams, photographs, etc., to the Secretary of the Section before which it has been presented, who shall endorse thereon the fact that it has been read in that section, and shall then hand it to the General Secretary.

Section 4. Official Resolutions approved by the Board of Delegates.

No memorial resolution or opinion of any character whatsoever shall be issued in the name of the Canadian Dental Association, unless it has been approved by the Board of Delegates.

The Committee on Necrology. To the Committee on Necrology shall be assigned the duty of collecting, as far as possible, the obituaries of members who have died since the last meeting. These shall be duly filed by the General Secretary. The Committee shall report on the call of the President of the last session of each general meeting.

CHAPTER 9. REFERENCE TO THE ASSOCIATION.

Upon the written request of ten per cent. of the members in good standing present at a meeting, the President shall direct that any business transacted by the Board of Delegates be submitted to a general business meeting of the Association.

CHAPTER 10. AMENDMENTS.

Amendments may be offered by any member of the Board of Delegates and shall be in the hands of the General Secretary three months before the meeting at which they are to be discussed and published in the Dental Journals and incorporated in the notice of meeting sent to the Board of Delegates.

CHAPTER 11. ORDER OF BUSINESS.

The order of business of the first general session of each meeting shall be as follows:

(1) Calling the meeting to order by the President.

(2) Addresses of welcome and response.

(3) Report of the Committee of Arrangements.

(4) Reading the minutes of the last general session.

(5) The Report of the General Secretary of the last general meeting.

(6) Presidential or other addresses, if decided on by the President and Committee of Arrangements.

The order of business for all subsequent general sessions shall be the

same as that for the first general session.

CODE OF ETHICS.

ARTICLE 1.

(a) The dentist should be ever ready to respond to the reasonable wants of his patrons, and shall fully recognize the obligations involved in his duties towards them, as in many cases they are unable to comprehend the operation service performed, or to correctly estimate its value. The practitioner must be guided by his own sense of right in treating the case, as his own superior knowledge dictates. He should gain the confidence of his patrons not alone by the skilful performance of difficult operations, but also by attending carefully to the simple cases committed to his care.

(b) The dentist, without being obtrusive or pedantic, should impart such information to his patrons as his opportunities afford him in regard to the causes and nature of the disease in the teeth or the adjacent parts which he may be called upon to treat, and should explain to them the importance of availing themselves of such timely preventatives or remedies as he deems necessary to their welfare. He should also communicate such general information as shall enable them to exercise an intelligent appreciation of what the profession aim to accomplish.

(c) The dentist should be temperate in all things, keeping both mind and body in the best possible health, that his patients may have the benefit of the clearness of judgment and skill which they have the right to expect.

ARTICLE 2.

(a) Every member of the dental profession is bound as such to maintain the honor and integrity of the profession. To this end he should himself be upright and courteous in his intercourse with the public and his brethren in the profession.

(b) It is unprofessional to resort to public advertisements, such as cards, hand-bills, posters, or signs, calling attention to peculiar styles of work, photos, lithographs or engravings made of wood, steel, or other materials advertising free operations, prices for services, special modes of operation, or to claim superiority over neighboring practitioners, to publish reports of cases or certificates in public prints,

to go from house to house soliciting or performing operations, to circulate or recommend nostrums, or perform other similar acts. But nothing in this section shall be so construed as to imply that it is unprofessional for dentists to announce in public prints or by cards, simply in names, occupation, and their place of business, or in the manner announce their removal from or return to business to issue to their patients appointment cards.

(c) The dentist when applied to merely for advice or temporary relief by the patient of a reputable practitioner, whose services he at the time is unable to secure, should guard against disparaging the family dentist by his enquiries or other means calculated to weaken the patient's confidence in him. At the same time the dentist should not, from too high a sense of professional courtesy to his neighboring practitioner, allow the interests of persons applying for counsel or service to be jeopardized.

(d) It is ever to be regarded as unprofessional to warrant operations or work as inducement to patronage. It is also unprofessional to violate or to be a party to the violation in letter or spirit of the dental law.

DIAGNOSIS

(Continued from page 336)

rectly into the field of observation, and mouth lamps which will illuminate all parts which we need to examine.

Magnifying glasses are very beneficial, as they increase the field of vision, making it possible to see minor details which are hidden from the naked eye.

THE TREATMENT OF PERIODONTOCLASIA

(Continued from page 345)

ever did in the first place. The work is there to be done, the patients need the service if they are to save their teeth and their health, and they are willing and desire to have it done when they understand the need. Let us arise to our opportunities in dentistry.

Canadian Dental Association

Minutes of Meeting Held at the King Edward Hotel, Toronto, on Tuesday,
May 17th, at 2.30 p.m.

The President, Dr. J. W. Clay of Calgary, acted as Chairman.

The President stated in his opening remarks that as there was considerable business before the meeting and only a limited time it had been thought advisable that all unnecessary reports would be eliminated. He stated also that there would not be the usual messages of welcome and response to the Canadian Dental Association as this had already been so well done at the annual meeting of the Ontario Dental Association on the previous day.

Dr. W. W. Wright, Winnipeg, stated that he would like to move a resolution in appreciation of the wonderful way in which the delegates of the various provinces had been entertained since coming to Toronto by the Ontario Dental Society. Motion carried.

Dr. D. J. Berwick of Montreal moved a resolution in appreciation of the hospitality received by the Canadian Dental Association from the Ontario Dental Society. The appreciation was signified in the usual manner. The President suggested that the Secretary send Dr. J. A. Bothwell, President of the Ontario Dental Society an expression of appreciation of the hospitality received, and remarked to Dr. Bothwell that while it was to be sent they were glad that he was present to receive it at first hand.

The Minutes of the previous meeting were read by the Secretary.

Dr. A. E. Webster, Toronto, suggested that all the committee members appointed at the meetings of the Association should receive instruction as to their duties. He moved

that the minutes of the previous meeting held in Halifax as read be approved. Seconded by Dr. J. A. Fleming, Prescott. Carried. Dr. A. W. Winnett, of Kingston, stated that he had a resolution which had been brought forward by a number of members from the West after consultation with a number of members from the East.

"WHEREAS, during recent years science has clearly demonstrated that the prevention of diseases and the maintenance of good health must include proper care of the teeth and surrounding tissues, and whereas, during the great war the Canadian Army Dental Corps so ably demonstrated its ability to care for troops of His Majesty's forces, and whereas, the permanent forces should be rendered the best dental services possible, and whereas, at the present time there are no dentists appointed to the permanent forces of Canada.

"Be it resolved, that we, the Canadian Dental Association and Ontario Dental Society here assembled in joint Convention recommend to the Minister of National Defence the appointment to the permanent force of at least one dental officer to each military district and that a copy of this resolution be forwarded to the Minister of National Defence."

Dr. Winnett, in explanation of his resolution stated that he had been connected with the Canadian Army Dental Corps throughout the War and spoke of its work and need, also that at the close of the great war Great Britain had organized a Royal Army Dental Corps as a permanent unit.

Adoption of the resolution moved by Dr. A. W. Winnett, seconded by Dr. H. C. Hodgson, Winnipeg.

Dr. A. E. Webster, of Toronto, asked for an explanation as to the present necessity for the resolution. Dr. Winnett outlined the present method of treatment and the necessity for change. The President explained that the resolution passed at the general meetings were acted on by the Executive who endeavored to carry out the wishes of the resolutions. Dr. Winnett stated that he felt that if the Association could see their way clear to pass the resolution and appoint two or three members from this Association to go to Ottawa and interview the Minister of Defence it would have the desired effect. He suggested that perhaps Dr. Conboy could give some information as to what action had been taken by the Ontario Dental Society. Dr. Conboy, Secretary of the Ontario Dental Society, stated that this matter had been taken up by the Board of Governors of the Ontario Dental Society and that they had been in touch with the other provinces and the Minister of Defence at Ottawa. He felt sure that if the resolution were passed they could arrange for a very strong deputation to go to Ottawa and present the matter to the proper Minister there. The question was asked the Chair, if there was not a Committee on C. A. D. C. establishment. The President replied that there was not at the present time. The Chairman suggested that the above motion by Dr. Winnett and seconded by Dr. Hodgson be voted on and that if passed the Executive could deal with it then. Motion carried. Dr. Conboy remarked that this could be carried into effect with less expense if it were left with some Executive to arrange it. Moved by Dr. A. E. Webster that the Chairman be given power to make such appointments as were necessary to deal with the resolution and with power to act. Seconded by Dr. W. E.

Willmott, Toronto. Motion carried. Growing out of this discussion it was suggested that a similar resolution might be passed in relation to a civil dental organization, entailing services to the D. S. C. R. (Department of Soldiers' Civil Re-establishment), the Schools for Indian Children, Public Institutions, etc. It was suggested by Dr. Wallace Seccombe that a similar resolution be passed and forwarded to the Department of Health that there might be established in that department a dental service to look after the health question from the standpoint of dentistry. The Chairman asked that this motion be left over until the following day.

Dr. W. W. Wright asked that these matters be not published in the press at present. This question was left with the Executive to deal with. The President then called for nominations of ten members for the Executive Council. The following were nominated:

Dr. A. D. A. Mason, Toronto.
 Dr. W. W. Wright, Winnipeg.
 Dr. Frank C. Harwood, Moose Jaw.
 Dr. E. L. Charron, Montreal.
 Dr. D. P. Mowry, Montreal.
 Dr. Archie Johnson, Vancouver.
 Dr. W. P. Broderick, Saint John.
 Dr. M. J. Gibson, Lethbridge.
 Dr. W. R. Somerville, Haileybury, Ontario.

Moved by Dr. Wallace Seccombe that nominations cease. Seconded by Dr. E. A. Grant. Motion carried.

The President then asked Dr. F. J. Conboy, First Vice-President of the Association, to preside. Dr. F. J. Conboy then called on Dr. J. W. Clay of Calgary, President of the Association, who gave his presidential address. Moved by Dr. Frank C. Harwood, Moose Jaw, that the President's address be incorporated in the minutes and referred to the proper committee. Seconded by Dr. M. J. Nolin, Montreal. Motion carried.

Dr. F. J. Conboy relinquished the Chair to Dr. John W. Clay. Dr. Frank C. Harwood presented the following report on the meeting of the delegates in connection with the proposed changes in the Constitution of the Canadian Dental Association: "In accordance with a resolution passed at the meeting of your Association in Halifax, last year, the President called a meeting of representatives of each province of Canada, to consider reorganization of the Association. It was felt that as at present constituted, it did not fittingly represent the Profession of Dentistry in Canada and could not adequately speak for the whole Profession in any large or national way. Only those who actually attended its meetings could be members of the Association between meetings. Accordingly, accredited representatives from most of the Provinces met in this City and in this building on Saturday last, the 14th of May, and have continued to meet on one or two occasions since, to draft a proposed constitution and by-laws to be submitted to the various provinces and to this Association. The proposed constitution with proposed by-laws is about complete and we believe it embodies the best features of a number of similar organizations. The present constitution of the Canadian Dental Association, the Constitution of the Canadian Medical Association, together with that of the American Dental Association, were used as the principal basis of our consideration. The principle on which we have worked is that of having the voluntary groups or Societies as units, whether Inter-Provincial, Provincial or local, which, together with ethical men in territory where there are no voluntary organizations, and who are taken care of in a special way, we hope to bind together by means of the Canadian Dental Association into one great body that will really represent Canadian Dentistry.

Without attempting to go into the proposed constitution at this time, in view of the brief period allowed me for this report, I may say that it is proposed to create a Board of Delegates composed of the Officers and delegates appointed by the Provinces. This Board of Delegates would act for the Association between meetings and would, in fact, transact most of the detail business of the larger body. This delegating much of the business of the Association to a smaller but representative group has worked very successfully in a number of similar organizations and is the method we propose to recommend to the Association and its constituent groups.

The Membership fee has been placed very low in the hope that a very large and permanent membership will result, and the additional hope that the smaller constituent Societies will collect the Canadian Dental Association fee from their members and forward to the Treasurer of the Association for the group. In that way a great many could be interested and the funds collected with the minimum of expense and effort.

It is also proposed that if in the territory where the C. D. A. decides to meet there is a Provincial or smaller voluntary Society, the Association will meet in conjunction with that Society and perhaps be a means of stimulating the local Society to greater effort on behalf of its members and the public at large.

The complete draft of the proposed constitution and by-laws will come before each Provincial or smaller Society in due course for their consideration and constructive criticism and will probably be submitted to this body at its next meeting. In the meantime I have endeavoured to give a brief outline of what the delegates have tried to do and trust that ultimately their efforts may in a humble way assist the Association to accomplish greater

things for the Profession to which we are proud to belong.

Moved by Dr. Wallace Seccombe that the general meeting of the Canadian Dental Association learns with gratification of the progress being made by the appointed delegates of the provinces of Canada in the proposed re-organization of the Canadian Dental Association and the drafting of a new constitution to put into effect the principles adopted at the last meeting of the Association held at Halifax in 1926. Seconded by Dr. D. P. Mowry. Motion carried.

The Chairman reported that he had received from Dr. George Kerr Thomson, President of the Dominion Dental Council, a report on the activities of the Council. Dr. J. Stanley Bagnall, Secretary of the Canadian Dental Association, read the report. The question as to whether this report should be embodied in the minutes was discussed. Dr. A. E. Webster stated that the original intention of the Canadian Dental Association was that the report from the Dominion Dental Council was read for information only and placed on the file of the Canadian Dental Association. Moved by Dr. E. L. Charron, that the report of the President of the Dominion Dental Council be placed on file. Seconded by Dr. M. J. Nolin. Motion carried.

The Chairman announced that the final meeting of the Canadian Dental Association would be held at 4.15 on the following afternoon. Motion to adjourn by Dr. H. C. Hodgson. Seconded by Dr. M. J. Gibson. Carried. Meeting adjourned.

Minutes of the Meeting of the Executive Council.

King Edward Hotel, Toronto, 2.20 p.m.

May 19th.

Present—Drs. D. P. Lowry, W. R. Somerville, John W. Clay, J. A. Bothwell, W. W. Wright, F. C. Harwood, Archie Johnson, Wallace Seccombe and J. Stanley Bagnall.

Dr. Johnson moved the adoption of the minutes of the previous meeting. Seconded by Dr. Mowry. Carried.

The Secretary presented a report of the finances of the Association which showed a balance on hand of \$824.78. Dr. D. P. Mowry moved that the report be adopted. Seconded by Dr. W. W. Wright. Carried.

Dr. D. P. Mowry moved that Dr. Wallace Seccombe and Dr. Archie Johnson be asked to prepare a resolution on dental services for institutions and individuals, for presentation at the next general meeting. Motion carried. Dr. Archie Johnson explained his views with regard to the publication of special resolutions in the press so as to insure that this material be inserted accurately by the newspapers.

Dr. Archie Johnson moved that in view of the projected changes in the constitution of the Canadian Dental Association that the present Hon. President, President, 1st and 2nd Vice Presidents be re-appointed. Seconded by Dr. Harwood. Motion carried.

Dr. W. R. Somerville moved that the President, 1st and 2nd Vice Presidents and Secretary-Treasurer be appointed a Committee to carry on the work of all the Committees until the next meeting, with power to appoint such committees as may be required. Seconded by Dr. F. Harwood. Motion carried. The following expense accounts were approved:—

Dr. John W. Clay, postage, telegrams, and stenographic service, \$40.00; Miss Gladys M. Littler, stenographic service, \$25.00; Miss O. Pascoe, stenographic services, \$6.10; Dr. J. Stanley Bagnall, Postage and telegrams, \$21.00; Dr. J. Stanley Bagnall, honorarium and expenses to Toronto, \$200.00. Dr. Somerville moved that the Association cheques be signed by the Secretary-Treasurer and countersigned by the President. Seconded by Dr. Harwood. Motion carried.

Dr. John W. Clay reported that the American Dental Association requested a number of clinicians for the American Dental Association meeting at Detroit. He stated that Dr. Fred J. Conboy had advised him that Ontario was willing to send a number of clinicians and register them as from the Canadian Dental Association. The Secretary was instructed to notify the General Chairman of Clinics of the American Dental Association to this effect and forward a letter of appreciation to the Ontario Dental Society for the action they were taking.

Dr. Archie Johnson moved that the time and place of the next meeting be left to the Executive. Seconded by Dr. Mowry. Motion carried. Meeting adjourned.

The Minutes of the Adjourned General Meeting, King Edward Hotel, Toronto, 4.30 p.m., August 19th, 1927.

Minutes of the previous general meeting were read and approved. Minutes of the Executive meeting read for information. Dr. Archie Johnson moved the following resolution:

"This Association feels that there is a vital need for the appointment of a dental officer who will be in charge of dental services for institutions and individuals who come under federal control, such as penitentiaries, schools for Indians, Indian reserves, Royal Canadian Mounted Police, and the department of soldiers' civil re-establishment, and the need of the development

of a dental service in the Federal Department of Health.

Therefore, be it resolved:

"That this Association respectfully recommends to the Honorable the Minister of Health, Dr. J. H. King, that such an appointment be made and that the Executive Committee be empowered to take such further action as there may be necessary."

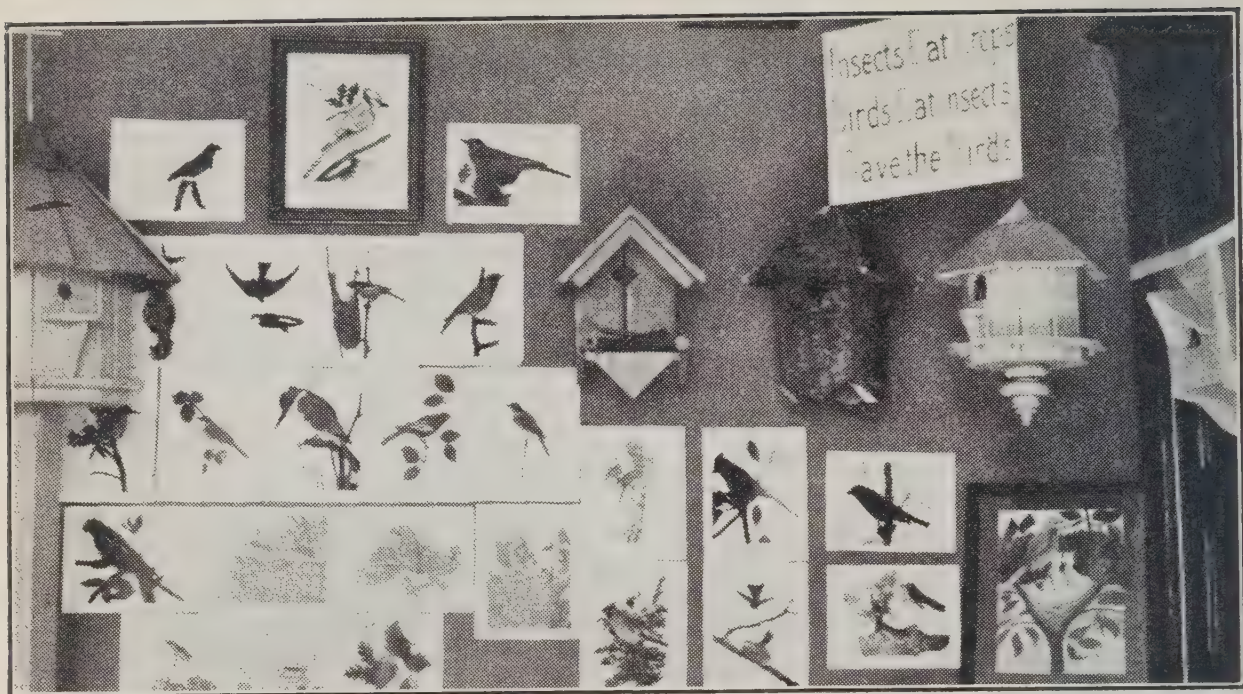
Seconded by Dr. Wallace Seccombe. Motion carried.

Dr. Archie Johnson moved that the resolutions as presented by Drs. Winnett and Johnson be handed to the President. Seconded by Dr. F. Harwood. Motion carried.

Dr. Mowry explained that the object of the motion in the Executive Council to re-elect the present officers of the Association was to enable them to complete the work already commenced in connection with the re-organization of the C. D. A. Dr. Mowry moved that the present officers be re-elected for the ensuing year. Seconded by Dr. F. Harwood. Motion carried.

Dr. Archie Johnson moved that the suggestion of the Executive Council re appointment of an Executive Committee to carry out the work of the various Committees till the next meeting and that they have power to appoint such other committees as are necessary be approved. Seconded by Dr. Wright. Motion carried. Meeting adjourned.

Stanley Bagnall, Sec.-Treas.,
Canadian Dental Association.



Bird Houses by Dr. Rondeau.

Hamilton Dental Academy

President—Dr. H. L. Field.

Secretary—Dr. L. A. Kilburn.

Vice-President—Dr. A. R. Poag.

Treasurer—Dr. G. M. Philp.

Ottawa Dental Society

The first regular meeting of the Ottawa Dental Society for the season of 1927-28, was held at the Dafodil Tea Rooms, on Monday, October 15th, at 6.30 o'clock, Dr. Lorne MacLachlan presiding.

The essayist of the evening was Dr. A. D. A. Mason of Toronto, who delivered a very interesting and instructive address on "Diagnosis", an outline of which will appear in this journal in the near future.

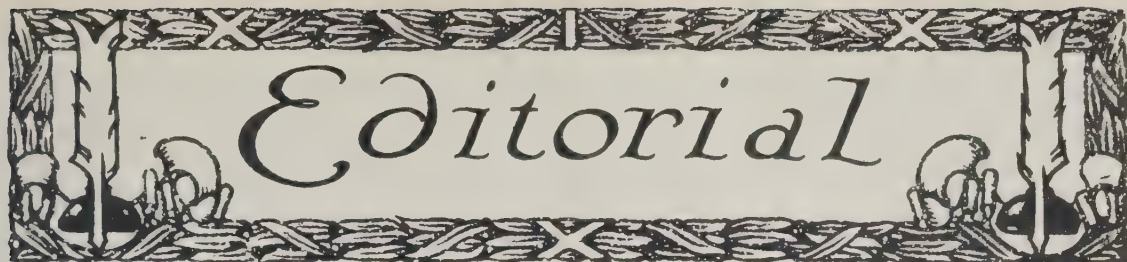
The meeting was one of the largest in the history of this society and the president took advantage of this to outline the work for the com-

ing term and intimated that some excellent papers and clinics may be expected.

Dr. R. Milton Armstrong, of Ottawa, has the honor to rank among the celebrities of the golfing world as he recently succeeded in making an "Ace" on the eleventh green of the Kanawiki Club, Montreal. The event was afterwards celebrated in the dining room of the Windsor Hotel when Dr. Armstrong entertained his friends in honor of the occasion.

President: Dr. Lorne E. MacLachlan.

Secretary: Dr. Ira W. Hamilton.



Editor:

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VOL. XXXIX

TORONTO, NOVEMBER, 1927

No. 11

Pseudoscience in Root Treatment Recognized by Prof. Barker

Of all the writing and speaking on the subject of focal infection for the past five years that of Prof. Barker in the January issue of the *Dental Cosmos* comes closer to a full statement of the facts and difficulties of the problem than any other. Every dentist who extracts teeth with the hope of curing focal infection or oral sepsis should read Prof. Barker's article at least once a month or until he fully comprehends all the underlying principles so easily expressed by the author. Every sentence has a meaning so wide and yet so sane that at first reading it seems simplicity itself but on more careful thought and collateral reading the deep and difficult significance of the problem is revealed. What he says of those whose researches are accepted and what he says of their methods of thinking is enough to awaken would-be researchers to the value and responsibility of their findings.

A man of forty-five has pain in his knee and has four teeth whose pulps are dead and calculus on the lingual surface of his lower incisors. By what observation, technique or process of thinking can it be determined that the pain in the knee is caused from his teeth? At present it cannot be done. Even if the teeth were extracted and the pain ceased it wouldn't prove anything. Blood tests are yet unreliable, inoculations into animals prove little, and clinical observations have as yet not been sufficiently classified to be depended upon.

There is more ignorance, vagary, and may we say, knavery about focal infection from human teeth than all other subjects in dentistry

today. Whole groups of dentists decide the matter of extracting all teeth which are infected either internally or externally, upon the vitality or non-vitality of the dental pulps. Others treat all cases by the use of electric currents of one form or another together with medicaments, and still others believe that a correct diet will save all teeth and avoid focal infection. Outside of clinical experience there is not a tittle of true scientific foundation for any such treatments. At all events, there is nothing on which to dogmatise. Read Barker's paper.

The Detroit Meeting of the American Dental Association

The meeting in Detroit will stand out as one of the greatest dental meetings of modern times. Every feature of the meeting was made the best of. It is impossible or undesirable to hold all the sessions under one roof. While the business headquarters were at the Book Cadillac Hotel, the general sessions sections, clinics and exhibits were held at the General Motors building several miles from the Hotel section of the city. The fourth floor of the building gave abundance of space for lecture rooms, clinics and exhibits. The exhibit room was the most commodious, best lighted and beautifully laid out of any exhibits yet made. There was no disturbance, noise or unpleasant interferences; there was ample accommodation for seven or eight thousand people at one time.

Every feature of dentistry was presented by speech, writing, drawing, cartoon, exhibit or moving picture. The meeting supplies an occasion for every kind of dental meeting from golf to dietetics or State Boards to pedodontics. The more extensive and complex the meetings become the less the opportunity to see things.

At the international meeting at Philadelphia the sections were but poorly attended and yet the opportunity to do so was splendid. The sections at Detroit were well attended. In fact if one failed to get in before the section opened there was little chance afterwards. The chief difference was that of accommodation. The seats were fairly comfortable, there was no outside noise and the light was good.

It is impossible to say much about what was presented except in a very superficial manner. Most of the papers were well presented. A few, however, took an awful time to tell the single point they were possessed of. Why should those who attend such meetings be called upon to listen to an hour's reading of old stuff just to find the point of the paper in the last paragraph? A paper on gold inlays in the operative section was of this character. After reading for half an hour or more on what could be found anywhere in dental text books the author said he had discovered an investment material which would stand a high heat without destruction and that it would expand just sufficient to overcome the contraction of gold from the molten state to the solid. The point was this investment could be bought at some exhibitors near by, thus avoiding the necessity of knowing what was in it.

It must be observed that like the sensational newspapers the title of a paper is no indication of what it is to be about. Dr. Dewey's very excellent contribution was like others so far as the heading was concerned, but not in paucity of matter. Dr. Dewey stated that high cusped teeth had a low contact point and high condyle path while those with flat topped teeth had a high contact and a flat condyle path. Based on these laws he would build bridges, dentures and fillings. J. Low Young several years ago said that the reason many cases of orthodontia failed to stay where put was the failure of the operative dentist to build high enough cusps on his fillings. For years the mark of a dentist's knowledge or skill was based upon the height of the cusps and the depth of the grooves he could make in inlays and amalgams. (carving cusps, if you please). Most of this was done regardless of the condition of the occlusal surfaces of the remaining teeth. If some dentists told the truth they opened bites of old men whose teeth were flat topped and built cusps of children on the restorations. How a little truth does get distorted! Dewey shows that there are laws governing these questions, and violations of them only supply an occupation for periodontists, exodontists and prosthodontists.

Here is an example of a heading having little to do with the subject of the title: "Radiography as an efficiency and economic factor in operative dentistry." When boiled down it was a plea for the use of the X-ray to discover proximal decays. One might judge from the paper that no other method was desirable or as efficient. Not a word about the dangers of X-rays to both operator and patient.

"The avoidance of failure in amalgam fillings" was well presented by Dr. Hill. The author stuck tight to the Harper technique. Dr. Harper privately says he has done a good deal of research on amalgam to discover the reason for a special technique for its manipulation. Judging from Dr. C. N. Johnson's paper and those of others, we are going to make more gold foil fillings, larger inlays, fewer silicates and better amalgams. A notable feature of this section was the large attendance to hear papers on the technique of ordinary dental operations. The paper on root canals was not very appealing. It didn't seem to reflect the modern viewpoint.

Porcelain is due for another period of popularity but not from any very attractive presentations at Detroit where the subject was cradled. There was little shown of a distinctive character. Porcelain was overdone twenty years ago and has had a difficult time to get any place in a modern dental practice. The more a dental subject is overdone the longer time it stays in eclipse.

Cavity preparation and a close study of tooth form should come to the front again. During the lifetime of Black these subjects never fell behind. Because of many factors, among them, oral hygiene, oral prophylaxis, diet, frequent and regular dental examinations, there are very few large cavities to fill, and as a consequence new instruments and a new technique must be developed. Dr. Prime is doing much to hasten the day when patients will not be asked to suffer large preparations and large fillings. Some dental manufacturers have been persuaded to make more suitable instruments for modern practice.

Notes

There is a close causative relationship between the teeth and eyes. There is a notion that the eye teeth especially come from or extend to the eye. There is little anatomical evidence to support this view but it must be remembered that the cuspid reaches well up to the eye.

A Doctor Brady answering a question for a reader of the Hamilton Spectator defines a moron as an individual whose mental capacity is that of a child of 8 to 12 years of age. "Millions of morons are good parents, good citizens, etc." Farther on he says it is likely due to a family taint; and yet he suggests to this moron that she may make a good mother. Why advise such people to become mothers?

Among the names of the directors of a new Professional Insurance Co. are to be found three dentists of Toronto, J. S. Lapp, G. F. Atkinson, A. O. Derbyshire.

Dr. Reid, a graduate of the Royal College of Dental Surgeons of Ontario, has been flying in the north country for some months and had the misfortune to crash at Metagami River and sprain his knee so badly that his companions had to walk to the nearest patrol station to summon help. He was taken to St. Joseph's Hospital, Port Arthur, in a Moth plane.

Dr. Frederick J. Capon was allowed \$156 damages to his motor boat from running into a boom of logs on Muskoka Lakes.

There has been formed in Toronto a Dental Assistants' Association.

Painless Parker reported in the assessment department at Vancouver as his gross income \$140,967 for 1923,

and \$149,493 for 1924. He asked for deductions which would have brought his net income to \$1617 and \$7822 respectively. The court placed the taxable income at \$28,200 and \$30,974. Even at the latter amount painless dentistry is a fairly profitable business in British Columbia.

The May Court Club of Ottawa is putting on a campaign to collect \$10,000 to be spent in charity. Among the charities supported is a dental clinic.

Some patients who wear vulcanite dentures have very sore mouths. A dentist has recommended that pure silver be deposited on the palatal surface by the Percy Howe process. Paint the surface with ammoniated silver nitrate and throw down the silver with formaldehyde or Eugenol. Two or three coats are sufficient.

Dr. F. A. Whitaker, Vancouver, brought action against his sister-in-law for malicious prosecution but failed in the action.

Dr. McKenna, honorary dentist to Ottawa Boys' Club at Mink Lake, found 56 out of 60 boys with defective teeth.

Dalhousie University Dental Society held its first meeting in the Forest Building on Saturday, Oct. 10th.

During the meeting Dr. J. S. Bagnall, secretary of the faculty, presented several prizes which were won by members of the society last Spring. The prizes, which took the form of reference books on various dental subjects, were given to Purves Miller, Charles Sullivan and Laurence Buffett, winners of the Nova Scotia Dental Association prizes, and the first and second E. A. Bell prizes respectively.

9 Modern Requirements

of the Dental Profession Met In a Dentifrice

- 1 Teeth whiter: for it removes the dingy film successfully — the film which the profession holds largely responsible for decay and pyorrhea.
- 2 Polishing agent: softer than the enamel and remarkably efficient in giving high polish and lustre.
- 3 Salivary flow: markedly increased by the mild acidity of the paste, hence better tooth protection.
- 4 Mildly acid: yet many tests show it harmless to enamel.
- 5 High polish: gives wonderful lustre and polish, so plaques less readily adhere.
- 6 Firms the gums: and, in addition, gives them a finer tonal quality.
- 7 Mucin plaques: curdles and disintegrates them at all stages of their formation.
- 8 Ptyalin index: decidedly increased to combat starch deposits better.
- 9 Alkaline index: decidedly increased, thus better combating causes of tooth decay.

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The Canadian Dental Hygiene Council is planning an extensive educational campaign and is concentrating on Saskatchewan this year. They expect to spend about \$5000 in sending speakers throughout the province, examining school children and in sending dentists to the outlying districts and Red Cross outpost hospitals.

Bernard Willinsky, D.D.S., graduate of the Royal College of Dental Surgeons, and now fifth-year medical student at the University of Toronto, has been awarded the Ellen Mickel Fellowship for 1927, which ranks second to the Rhodes Scholarship. The Fellowship is awarded to the student (or students) who has taken first-class honors in at least three-fourths of his subjects at the end of the fifth or sixth year in the medical course. Dr. Willinsky is a member of the honorary medical fraternity, Alpha Omega Alpha.

The friends of Otto W. King, D.D.S., for fourteen years secretary of the American Dental Association, will regret to learn that he has retired from office.

Dr. Charles A. Raver, dentist, has, through J. H. Ogilvie, filed a claim in the supreme court for \$1,970 damages, against Jack Hays Limited as a result of injuries received in a collision on August 12. Plaintiff was proceeding on 98th Avenue when his auto collided on 109th Street with taxi L-23, and negligence on the part of the de-

fendants is alleged. Dr. Raver had his right hand severely cut and was bruised about the body and limbs.

Dentists are in the habit of advising their patients to use table salt on their tooth brushes and at the same time advise against the use of starch not knowing that most table salts are largely made up of starch. Use kitchen salt instead.

It is passing strange that when a newspaper wants to supply its readers with information on the teeth it should employ a physician to do it. Such outstanding papers as the Hamilton Spectator and the Toronto Star must have some reason for their action. Hamilton dentists would surely supply the stuff free of cost to the Spectator. Some newspapers want dentists to pay for space while they will pay a physician for the stuff. Will some dentist explain this situation.

Dr. Percy A. Ash of the University of Sydney addressed the dental students of the University of Toronto during the Centenary celebration.

The Britisher whose children are having their teeth treated in the London county clinics says: "Is this child mine or the London Council's?" This form of objection is the hardest to meet in the schools.

The local Council of Women are urging the appointment of a woman dentist to care for the inmates of the Mercer Reformatory, Toronto.

FOR SALE—Dental practice, Border Cities, doing \$10,000 per year. Owner going into manufacturing business in Chicago. Box 51, Dental Journal, 73 Richmond W., Toronto.

FOR SALE—Ritter Lathe, Burns Casting Machine, Buffalo Vulcanizer, Ritter air compressor. Box 52, Dental Journal, 73 Richmond W., Toronto.

HIGH GRADE RECUT BURS only \$3.00 per gross. Guaranteed Rebuilt Handpieces—Contra Angles \$2.50 — Right Angles \$2.00 — BUR LATCHES new style—1 doz. \$1.00—Best Medic Rubber Apron \$2.00—Dr. Peck's New Inlay Wax and free Book 50c—SHEUN & CO., 602 Oakwood Blvd., Chicago, Ill. Established 1906.

GRADUATE DENTIST with three years' experience desires a position with a dentist in Western Canada. Anyone interested write Box 50, Dental Journal, 73 Richmond W., Toronto.



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Otto Nase, D.D.S.

On Saturday, August 27, of pneumonia, there passed to his rest, Doctor Otto Nase of Saint John, N. B., at the age of 46. Without question his professional friends (every single member of his chosen profession was a friend:—he had no enemies) agree that he was singularly gifted as an operator having artistic instincts, and recognized his achievements as in accord with the highest ideals.

He was always eager to acquire knowledge:—the theory concerning the latest advances in practice, as well as the technique of operation, and was ever ready also to impart the knowledge so acquired to his confreres.

They will all miss his genial companionship and his cheery smile. His patients will sorely miss his gift of skill, and the community will deplore the passing of so good a citizen.

Dr. Nase was born in St. John, received his early education in the city schools and later attended Mount Allison Academy.

He achieved success not only in his studies but also in athletics, notably as a gymnast, a hockeyist and a football player. Shortly after leaving college he made a visit to British Columbia, to Greenwood, Nelson and Vancouver. It was in the last named place that he achieved a notable feat, which many Vancouver citizens will even now remember. Playing on a hockey team in a game, the winning or losing of which would mark a crisis he found that the team was not functioning in team play, and his sporting instinct could not stand the pressure; so he cut loose and, single

handed, swept the opposing team, figuratively, off the ice, and scored a win for his team. The next day to use a slang phrase he owned Vancouver.

In golf as in other lines of sport he was a player always to be reckoned with, and whatever the situation he always came up smiling. When your opponent is always smiling he is never defeated.

Returning to Saint John he decided to study dentistry. He attended the University of Maryland and graduated from that institution in 1905. He was a member of XI-Psi-Phi, and Theta-Nu-Epsilon fraternities.

He never held office in the New Brunswick Dental Society simply because he would never accept nomination. Any office in the Provincial Association could have been his at any time on his intimating a willingness to accept.

On the organization of the Saint John Dental Society he assumed the duties of secretary until the infant society was fairly well developed, when his energies were better employed in fostering clinics.

He went overseas in 1916, doing duty in the C. A. D. C. in England and in France. After the Armistice he consented to continue in the service in Saint John, while the volume of Post-discharge Dental treatment was at its greatest height. Having completed what was considered his full duty in the Service, he asked to be relieved and resumed private practice in 1920.

He was married in September, 1905. His wife, nee Alice Smalley, survives.

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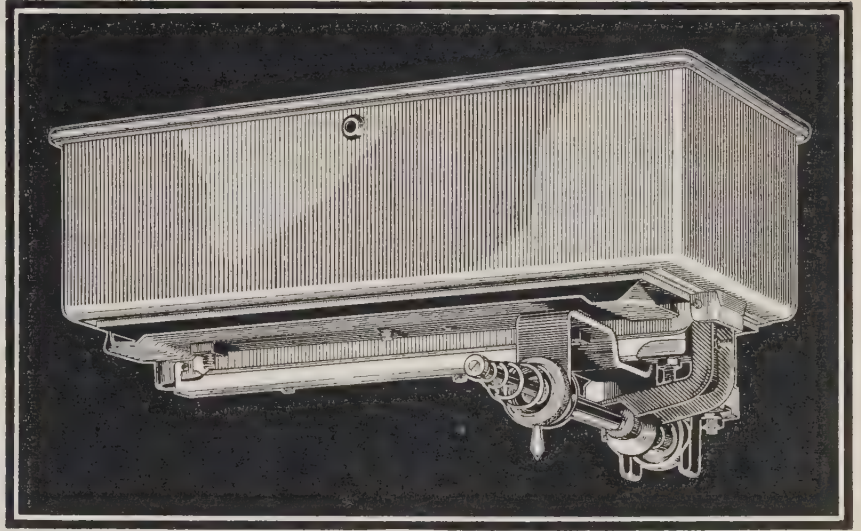
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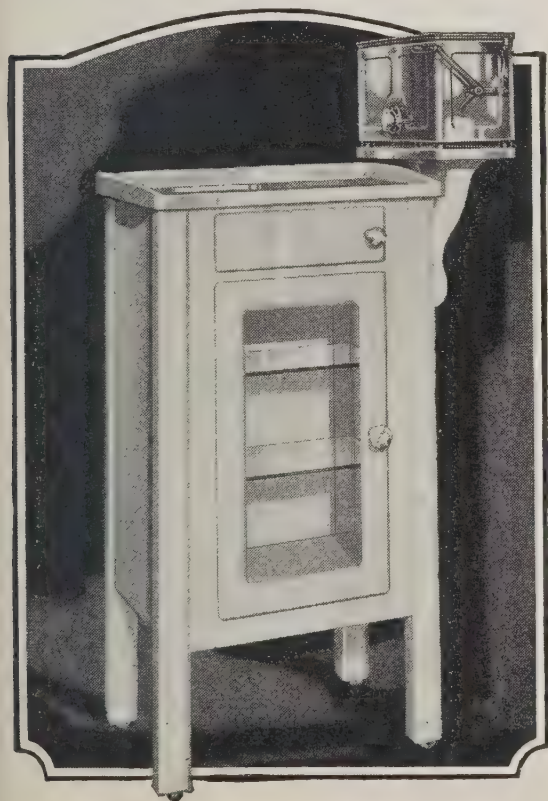
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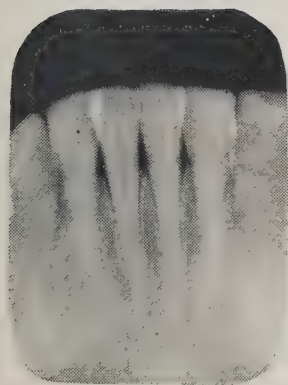
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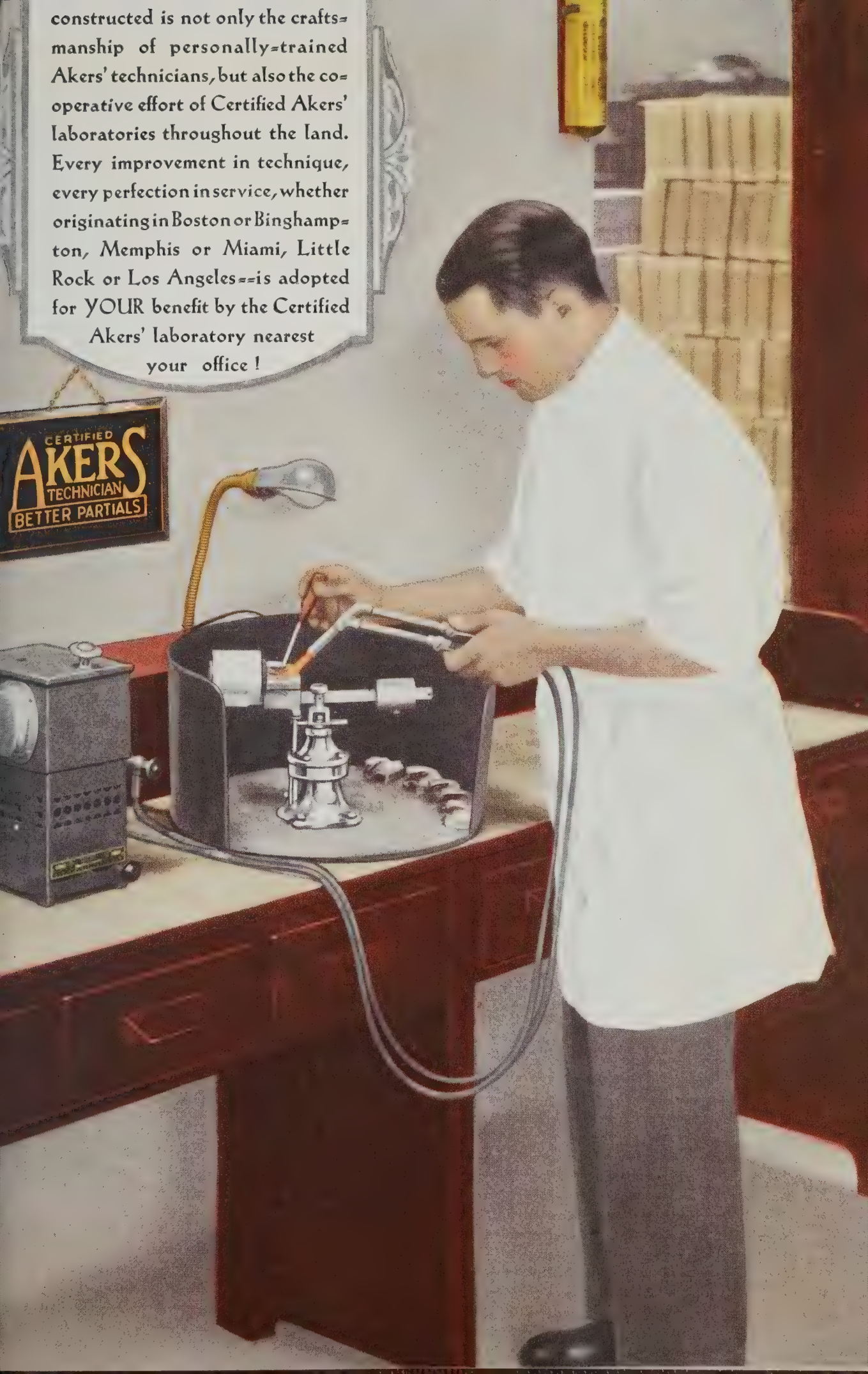
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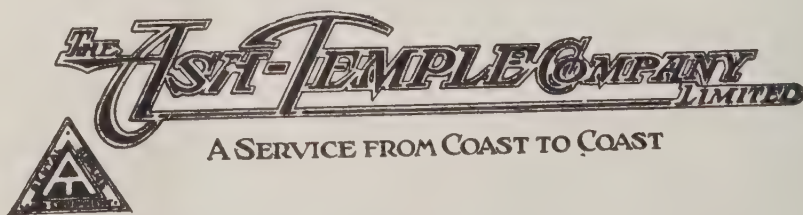
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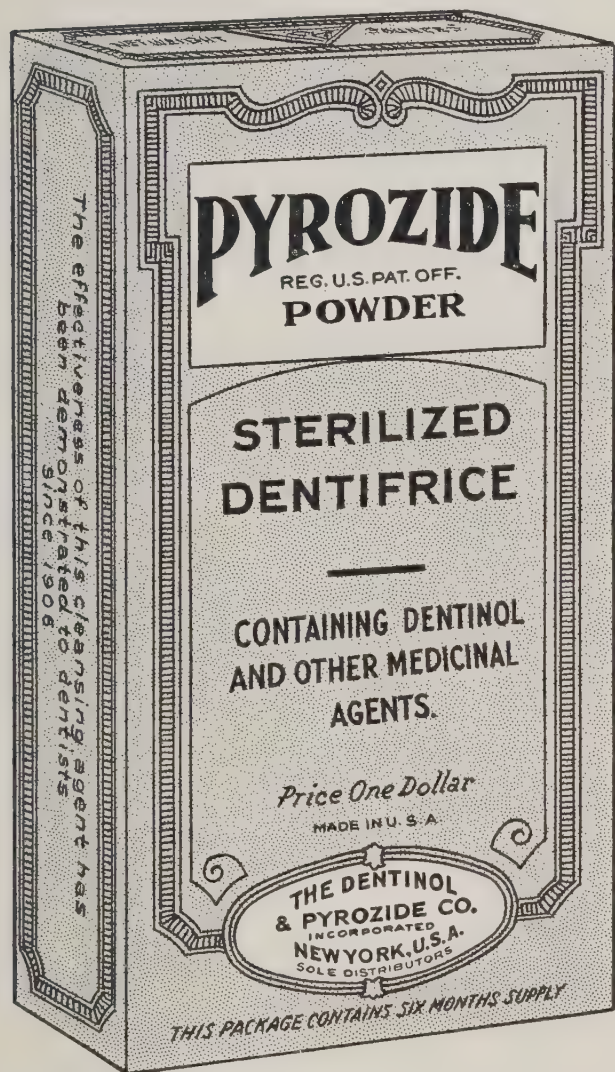


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Dominion Dental Journal

Vol. XXXIX

TORONTO, DECEMBER, 1927

No. 12

ORIGINAL COMMUNICATIONS

Report of the President of the Dominion Dental Council to the Canadian Dental Association, 1927

GEORGE K. THOMPSON, D.D.S., HALIFAX

Mr. President and members of the Canadian Dental Association:—

Since the organization of the Canadian Dental Association and Dominion Dental Council this is probably the first time meetings have not been held simultaneously. It has been the custom for the Dominion Dental Council *to report to the profession* in Canada through your organization at your biennial meetings *as well as the Dental Journals*. This year, no provision was made for a meeting of the Dominion Dental Council, and as President of the organization I have been requested to present a report for your consideration.

Since our meeting in Halifax last August, the matter of Dental Education and Legislation has received the serious consideration of the Council and correspondence has been conducted and interviews held with representatives of Universities and Provincial Boards. This has resulted in

the realization that the *Dominion Dental Council is misunderstood* by members of the profession throughout Canada, *particularly in Quebec and the Western provinces*.

It has been stated that the Dominion Dental Council has not been a success because it is not incorporated and organized under a Federal Act of Parliament. So far as I am aware it has certainly been a success as a registering medium among the provinces which are members of it, and it has certainly been a success in standardizing and improving Dental Education and Legislation in at least some provinces. If it has not been successful *universally* throughout Canada it is not because it was not incorporated under a Federal Law, but because of lack of co-operation on the part of the provinces which are not represented on it.

While I am not opposed to its organization and incorporation similar

to that of the Medical yet I believe that if Quebec and British Columbia would become members of it and co-operate to the desirable extent it would fulfil the objects for which it was created and become an example to every other country in the world in so far as reciprocal registration is concerned and also of unselfishness and co-operation.

In my presidential address at your last meeting I suggested and urged the co-operation of the Provincial Dental Boards and Universities with the Dominion Dental Council for the purpose of solving our problem, and since then in correspondence and interview with representatives of those bodies have been assured of such co-operation. In this connection it is hoped that the re-organized Canadian Dental Association as suggested at your last meeting and for which delegates from the various provinces are meeting at this time, may prove a valuable aid in the re-organization of the Dominion Dental Council which will be recognized by every province and by which every province in Canada and all Dental Schools in America complying with these standards and regulations will be recognized.

The Nova Scotia Dental Board has already arranged with the Dominion Dental Council examiners to act as examiners for Nova Scotia.

Although no official action has been announced by the Quebec committee on inter-provincial relations, we are pleased to learn that the matter of inter-provincial recognition is receiving its serious and we hope, favorable consideration.

As the Universities of Canada particularly those with Dental Faculties are much interested in this question, it has been suggested that it be thoroughly discussed at the Conference of the Universities to be held in London, Ontario, in June.

As President of the Dominion Dental Council may I be permitted to offer for your consideration the following suggestions:

1. The members of the D. D. C. are not opposed to incorporation by the Federal Government.

2. A committee composed of the President, Secretary-Treasurer with Drs. Clay and Croll has been appointed for the purpose of co-operating with Provincial Dental Boards and Universities in standardizing and improving Dental Legislation and Education and arranging a scheme of incorporation satisfactory to all the Provinces.

3. The Universities of Montreal, McGill and Toronto have already adopted a reasonably high standard of preliminary and professional Dental Education and Alberta and Dalhousie Universities have the adoption of such standards under serious consideration. The preliminary education to be the same as that for the study of Medicine with the same professional course already existing.

4. As the majority of Dental Schools in America now or will soon require the same preliminary education for dentistry as for medicine it should simplify the enactment of desirable Dental Legislation throughout Canada.

5. While standardized Provincial Dental Legislation is very desirable it is not necessary to the organization and incorporation of a central examining body except in so far as recognition of the certificate of that body is concerned.

6. The Dominion Dental Council expects that its present regulations will *necessarily be modified* to meet the views of members of the profession in *all* the Provinces and its committee desires to meet and discuss Dental Legislation and Education with representatives of the Provincial Dental Boards and Universities at the earliest possible moment.

Regretting that owing to the dates of your convention conflicting with those of the Convention and other closing exercises and meetings of our Dental School, I am not able to present this report in person and wishing you all a most successful and happy meeting.

All Compound Technique in Impression Taking

A very interesting clinic on "All compound technique in impression taking" was given at the regular meeting on November 14th by Dr. Lorne E. MacLachlan.

A very large number of the members were in attendance and displayed great interest in the clinic.

Dr. J. G. Dormer also favoured the society with a resume of the Post Graduate course on "Periodontology" given at the R. C. D. S. last September.

Clinic on "All Compound Technique for full lower impressions" by Dr. Lorne E. MacLachlan, Ottawa:— (The Technique of Clapp and Tench as adopted by Dr. R. O. Schlosser of the Post Graduate Prosthetic Department of North Western University and that which will be demonstrated by Dr. Schlosser during his full denture course at the Ontario Dental Association meeting next June).

The impressions are taken in the "closed bite" position and "chilled" while both are in that position and supporting each other in the mouth.

The muscle trimming of the upper is done in the mouth by the patient while that of the lower is done outside the mouth by a sharp knife. After the simultaneous molding of the entire mass of the base of the impression compound against the tissues by the action of "close, suck and swallow" while in the closed position.

Definite suction can invariably be obtained in lower impressions by the general practitioner by this simple and brief technique, and this suction obtained can be retained throughout, and improved in the finished denture by a careful technique. Master models must be made

of Spence's plaster or artificial stone. Avoid the use of all plaster of paris for flasking during vulcanization. However, equal parts of plaster of paris and Spence's plaster makes an ideal quick-setting investment.

After the insertion of the denture, balanced occlusion in centric, protrusive and lateral relationship is the all-important and essential factor which permanently retains and improves the suction already obtained.

For the all-compound technique, a small pointed flame is absolutely essential. The Hanau Alcohol torch or the Raplar impression Lamp are the most convenient and ideal. However, good results can be obtained with the Mouth Blow Pipe—Tench pattern.

The clinic included a Full Lower Impression and a Rebase on patients. A series of mounted models shown in sequence, each step in detail, and with a printed notation accompanying each model were passed around and illustrated slides showed the various steps taken.

"All Compound Technique for Lower Impressions" by Dr. Lorne E. MacLachlan.

The technique of Clapp and Tench as adapted by Dr. R. O. Schlosser of the Post-Graduate Prosthetic Department, Northwestern University, Chicago.

STEPS:—

- 1.—Preliminary impressions.
2. (Lab.)—Study casts with outline of tray. Giffen Tray, No. 5 or 7, formed to follow arch curve but not too closely contoured to ridge form. Should be trimmed so as not to interfere with any moveable structures.
3. (Lab.)—Apply three millimeter

- thickness of Kerr's compound moulded loosely to outline on study cast. Heat upper surface and imbed tray in the compound.
4. (Lab.)—Ridge surface of tray smeared with Kerr's tracing stick compound.
 5. (Lab.)—Occlusal rim of compound about 6 mm. wide and nine mm. high, attaching same to tray completing occlusal support.
 6. (Lab.)—Reduce any over-extensions of flanges by knife trimming.
 - 7.—Glaze surface of occlusal rim and insert in mouth having patient close to obtain imprint on same of the maxillary rim or the upper denture.
 - 8.—Base of occlusal support (the compound tray) lined with a three mm. layer of soft impression compound uniformly distributed, glazed, tempered, and with upper base or plate in position, the lower is introduced into the mouth, patient instructed to "CLOSE, SUCK and SWALLOW", thus working out a simultaneous moulding of the entire mass against the tissues.
 - 9.—Instruct patient to keep jaws "CLOSED" and chill thoroughly.
 10. (Lab.)—Remove and place in ice water till hard.
 11. (Lab.)—Trim base impression with sharp knife to the following landmarks:—
 - A.—Internal and external oblique line.
 - B.—Labial and lingual muscle markings.
 - C.—Retra-molar triangle region.
 12. (Lab.)—Cut off flange at distal.
 13. (Lab.)—Reduce bulk to three mm.
 - 14.—Test impression as to A—Stability, B—over extension, and correct if necessary.
 - 15.—Make heel corrections with tracing stick.
 - 16.—Make final test.
 17. (Lab.)—Boxing in impressions with black carding wax or Dentsply Boxing Wax.
 - A.—Floor in lingual gap between flanges with black wax.
 - B.—Reinforce heels.
 - C.—Straight piece of black wax around periphery forming shoulder.
 - D.—Attach band of wax of sufficient width for box.
 18. (Lab.)—Casts of Spence's Plaster or Artificial Stone. Under test Spence's plaster has shown greater resistance in vulcanization than any other plaster or artificial stone.

Formula: 1 oz. water to about 4 oz. by bulk, of Spence's plaster.

Rule: 1 oz. water sufficient for one model.

For the all compound technique a small pointed flame is absolutely essential.

The Hanau Alcohol Torch is the most convenient and the best obtainable. However, the "Mouth Blow Pipe" (Tench Pattern) will give result.

In order to retain in the finished denture the suction obtained in the impression, it is necessary to avoid the use of "all plaster paris" investment for flashing during vulcanization. However, equal parts of plaster paris and Spence's plaster make an ideal investment.

After the insertion of the denture "balanced occlusion" in centric protrusive, right and left lateral and their various accompanying relationships is the "all important and essential factor" which permanently retains and improves the suction which has already been obtained.

"Profession Denture Service, Volumes 1 and 2" published by the Dentists' Supply Co., are an excellent and wonderful asset in improving every detail of denture technique.

Conservative Treatment of Infection Due to the Teeth and Alveolar Processes

F. E. RISDON, M.B., D.D.S., F.A.C.S.

It is not my purpose to attempt the whole spectrum of focal infection but merely to touch upon problems relative to this subject as it cannot be hoped that this will be accomplished in this decade. If I can help in some slight way by adding to your present information on focal infection, I will feel gratified.

There are a few sources of infection that we will merely mention, namely the Sinuses about the head, the Tonsils, the large and small bowel and the Genitourinary Tract, maintained by various types of bacteria, the most likely of which to be confused with Oral Infections, is (the Gonococcus). I cannot enter into a discussion on bacteriology, but the Streptococcus of some type is most likely the causative agent where infection occurs about the jaws.

There are the following symptoms that one considers due to focal infection, namely: Pain on movement of simple or multiple joints, muscular tenderness, eye lesions, heart and kidney disturbances, a general lowering of vitality (or pep), loss of weight, irritability, nervousness, poor appetite, etc. This infection will manifest itself when associated with the teeth in the alveolar processes of the jaws and in the upper jaw the antrum of Highmore may be invaded by the extension of the infective process, but if there is a free discharge of pus, very little absorption takes place with the exception of a closed Empyema of the antrum. The alveolar process percee, is lost in pyorrhea, or as more recently termed Periclasia, but as free drainage is provided along the root, very little absorption occurs, but of

course the patient may and likely is, absorbing this infection through the bowel. Some of the experimenters maintain that you do not find heart lesions, eye lesions or kidney lesions in patients suffering from pyorrhea.

Then the question arises, how much absorption occurs from the cysts that one sees so frequently in the alveolar process. There is no doubt that at an early stage of their existence, these cysts were not surrounded by a capsule, but as they mature with time, the capsule becomes dense and is lined by squamous or columnar epithelium and the contents of the fluid is sterile. Consequently, very little absorption could occur from these cysts.

Another condition that one sees is the discharging sinus from abscesses about the teeth. Here again pressure of the infection is released and the pus is escaping along the sinus. Therefore, very little absorption is occurring except when the patient swallows the discharge and absorption occurs in the Alimentary Tract. It is felt that very little absorption occurs where the pus is discharging but there is considerable absorption where the infection is under pressure, such as a closed Empyema of the antrum or the recent blind abscess about the apical area of the tooth. From the dental standpoint, the life history of this infection is first the death of the pulp (the nerve) of the tooth, resulting from infection or trauma. The infection passes through the apical foramina and causes a localized or defuse osteitis, as the round celled infiltration has not as yet had time to throw out a limiting membrane and without

doubt, considerable absorption occurs at the time. If this process continues owing to the constant re-infection from the supply in the tooth, a limiting membrane will form, if the patient lives long enough. Or the patient will develop a general septicemia as blood in the bone may be considered in the general circulation.

The question is frequently asked, "Do crowns or bridges cause infection percee?" and the answer is of course in the negative as the only source of infection is through the pulp chamber. Occasionally teeth are found with fillings which, owing to shape and size, act as a thermal irritant and in this way destroy the pulp of the tooth or sometimes the tooth has to be ground down to such an extent before the crown is placed over it that the pulp is in jeopardy. Consequently in reading one's X-Ray's these things must be kept in mind. Further, over-hanging amalgum fillings may cause irritation of the gingival mucous membrane, but this does not mean death of the so-called nerve. One other point about bridges is that strain, may if placed on teeth, result in the death of the pulps.

The question then resolves itself, "What teeth should be extracted where certain symptoms exist?" If the patient is over fifty or is seriously handicapped, all pulpless teeth should be removed, but when the patient is young and these areas appear well walled off, there is little indication for their removal with the exception that they may enlarge and cause some deformity or encroach upon other structures. Unfortunately it does not follow that there is improvement after extraction of all pulpless teeth. Of a series of two hundred cases having various manifestations, four per cent. were cured by extraction, thirty-seven per cent. improved and the rest, doubtful. There is no doubt that the statistics vary considerably according to the author and his

enthusiasm or antipathy to this type of treatment. If a large percentage of patients are not helped by such treatment we should make every effort to investigate these cases more carefully before they are sacrificed on a pseudo-scientific altar. The X-Ray laboratories may send out reports suggesting that infection is seen in the jaws and the inference is that certain teeth should be extracted and we believe that this is being done in a wholesale way to the detriment of the patient without sufficient consideration being given. I do not believe that a final opinion should be given on Rontgen Rays without seeing the patient and certainly not by an individual technician or physician of any X-Ray laboratory, and considered the final word. The relationship of the physician and dentist has been much closer in recent years, and I believe that their joint problems will be better understood when the physician will ask for a written report from the dentist and there will be a consultation before too drastic action is taken. I know that physicians feel that the dentists are sometimes at fault in not understanding the problems of the sick patient which confront the physician and perhaps the medical man may be right to a certain extent because the dentist only sees the patient in his office and not in the hospital. This is largely being overcome now by establishing dental clinics in the hospitals. In the meantime, could it be urged that these cases be gone into more carefully from the standpoint of clinical and X-Ray findings and if necessary a consultation suggested as the patient values his teeth highly from a masticatory and asthetic standpoint.

I desire to thank this association for extending to me this privilege of appearing before you.

Fulton Risdon, M.B., D.D.S., F.A.C.S.

Read before the Eastern Branch of the Academy of Medicine.

Dr. Mark G. McElhinney—An Appreciation

A short time ago I received from my old college associate, Dr. Mark G. McElhinney, of Ottawa, a beautifully printed collection of poems entitled "Morning in the Marsh".

In reading the book carefully I was much impressed with the high merit of his work, and I must say that this volume of poems is an excellent addition to our Canadian Literature.

I am sure, those who were associated with Dr. McElhinney at college will be pleased to learn of his success in this direction. I well remember his ability in those days, as he cleverly wrote a number of our college songs, and also prepared the songs for our college dinner—which by the way was a great event.

In writing the songs he aptly used a number of the students' names to make the songs more attractive and to excite much merriment. One song which he composed, I am sure, would have been a complete failure had he not used my name to make the song a successful hit!

From the first day he began to write college songs he was named our scribe or Poet Lauriete, and I am sure, his old chums will be delighted to learn that he has deservedly won the spurs and is entitled to wear this coveted honor, for I understand that Dr. McElhinney has the distinction of presenting the first published work on poetry by any member of the Royal College of Dental Surgeons—in fact by any Canadian dentist.

This is another honor accorded to the Dental Profession and to the old college from which he graduated, then located on Louisa Street.

On reading Dr. McElhinney's poems one will readily come to the conclusion that he has been inspired and

enthralled by what he sees in the out-of-door recreation—the benefit one derives from camp life, the gun, the rod and the sailing craft, etc., for many of his poems show that he is a devotee of Nature—in all her moods, and every lover of nature will appreciate the sentiments expressed therein. Thus he has appropriately given the title of his book "Morning in the Marsh".

In his book he has displayed ability in a variety of subjects, and in many instances shows a philosophical turn of mind, that is he searches into the reason and nature of things, with an originality of thought and application.

How delightfully does he write, that exquisitely dainty poem "The Meadow Lark" with purity and simplicity of language as—

"Up from the sod where bluebells nod
And the blood lilies flame,
He seeks the nearest perch to trill
His welcoming acclaim."

Another poem which deserves notable mention is "The Song of Steam" of very high merit and displays considerable executive poetic ability, showing his knowledge of the wonderful power of steam.

The title poem "Morning in the Marsh" is good, and describes the sport of shooting wild ducks. The last verse of this poem admirably expresses the idea, that the savage instincts are so deeply stamped in man, notwithstanding all the beauty he observes in Nature, that he takes delight in destroying animal life.

Canadian literature has developed along national lines, for it bears an intimate relation to its history, in rise and progress, in social, moral and political attainments, and like

wise has created writers of marked ability.

Some of the finest gems of the English language have been penned by Canadian authors.

Dr. McElhinney shows an aptitude in making good comparisons, as for instance—

"Like the sun-lit glinting lake,
Lifetime has its ebbs and flows"

Those who are engaged in in-door occupations, such as our profession, should take advantage as much as possible, to get in touch with Nature's Wonderland, that we find so prevalently abounding in Canada, will give us an inspiring thrill, which will benefit body, mind and soul, or during the long but pleasant winter evenings, after a strenuous day's application, rest contentedly beside the ingle-nook fireside devoting any spare time in reading some choice books of literature, including those from the pen of our Canadian authors.

We will find the reading of poetry is an elevating and pleasurable pastime, for, as Elizabeth Barret Browning says—"poetry is the first, and most celebrated of all the fine arts. The noblest of the productions of man, that which inspires the enthusiasm of virtue, the energy of truth, elevates the mind to heaven; kindles within

it unwonted fires, and bids it throb with feeling exalting to its nature". It is a source of satisfaction to realize, that we were taught in school days to commit to memory many fine passages of literature, which we can now distinctly recollect, or even earlier in life, for how pleasant it is for most of us, to recall the happy days of childhood, when we heard our Mother sing the old familiar hymns, in the little church on yonder picturesque hill, where she worshipped, or at eventide, when we prattled by her side,—after an adventurous day's play—she clasped us securely in her arms and then rocked us peacefully to sleep with her sweet poetic lullabys.

Surely those inspiring words were the first intimation we had of poetry!

Time nor space will not permit me to say more of the other excellent poems, which make up the contents of the book, but in conclusion I wish to congratulate Dr. McElhinney on the high merit of his work, which is a distinct honor to our beloved profession, and also a worthy contribution to Canadian literature.

Theodore Clark Trigger.

Princess Avenue, St. Thomas,
Ontario, Canada.

Resume of the Post Graduate Course at R.C.D.S. Last September

Delivered before Ottawa Dental Society by Dr. J. S. Dormer, Ottawa, Ontario.

Mr. President and Gentlemen,—

This short discussion is not an attempt to cover the entire subject but rather a brief summary of the newer findings as given in the post graduate studies in September.

Periodontology as in medicine and the other sciences passes in its progress through periods in which certain theories govern for a time. Scientific investigation was initiated in a period in which methods of research were dominated by structural pathology, but today a different aspect is taken through physiological or functional influence especially in the supporting structures. The health of the supporting tissues is in a large measure dependent upon normal function and the correlation between function and structure is of utmost importance in the final conception of the whole.

The chief forces acting upon the tooth in occlusion are pressure produced by the opposing tooth and resistance of the periodontal tissues, these must balance. Torque is the force producing rotation about a given axis; where the torque is greater than the resistance of the supporting tissues we have a traumatic occlusion, resulting in tissue changes of which you are all aware and in consequence resistance of the investing tissues is increasingly disestablished. We are prone to think of the recognition of traumatic occlusion as something comparatively new; it is interesting to know that in 1821 an Englishman wrote an article on the "Grinding of teeth to correct diseases of the gums". He says that although quite successful it had gone into disrepute because of the extreme thinness of enamel. A gentleman who has spent thirty-five

years in Manchuria, and one of the few white men to enter Lhasa brought out an interesting curio, a tapered cylinder of jadeite. The monks treated their yaks for what we know as "lampers", and at some period applied this knowledge to the treatment of humans. Using a sawing motion they slowly polish down maloccluding teeth. Investigation of their ancient writings reveals this to have been practised for 2,000 years, how much longer is not known.

To understand traumatic occlusion we must have some conception of the eruption of teeth. In the past we were taught that there is a normal eruption to the proximity of the cemento enamel junction, but investigation has disproven this. Teeth erupt continuously and at different rates and as the contact points become worn they move mesially. If abrasion of the occluding surface is not in ratio to the propulsion of the tooth, balance between torque and investing tissues is upset with subsequent pathological changes. Gottlieb of Vienna says occlusion should be checked up every six months. The factors governing eruption are not fully understood at the present time, but investigation is being carried on and no doubt they will be more clearly understood shortly. We do know that infection, trauma, and other irritants accelerate it, while rickets and certain other deficiency diseases retard it, and that there is infra as well as extra eruption.

Occlusion has been classified into the following—

Primary—Occlusion normal; Periodontal tissues normal.

Secondary — Occlusion normal; Periodontal tissues abnormal.

Combined A—Length of clinical crown out of proportion to investing tissues.

B—Same with loss of alveolar support. This is the most pernicious type and if not checked the teeth are quickly lost.

In correcting malocclusion we must bear in mind the ratio of lateral and vertical stress. As we decrease the angle of the incline plane of a cusp we lengthen the extra alveolar lever arm as we carry that plane towards the greatest circumference of the crown and upset the stresses. The lateral stress must be lessened by shortening the lever arm. We have this condition also in occlusal restorations out of contact or in caries.

Formerly in the elimination of the pocket drugs were used to destroy the epithelial lining, but it has been proven there is infection beneath this lining. Dr. Box has designed curettes to dissect this out to healthy tissue, blood vessels are opened and we have a thick liver like clot containing the necessary thrombins, etc. A harsh rickety sound is heard when healthy fibres in the connective tissue are cut.

The following are the steps in case management—

1. General examination, X-Ray, vitality, mobility, recession, eruption, use and disuse gums gingivae.
2. Determine negative teeth superficial cleaning of mouth, extractions.
3. Correct occlusion, tooth brush instruction.
4. Operative.
5. Scaling, elimination of pocket.

The following are a few of Dr. Box's formulae—

If unable to scale because of sensitive necks of teeth. Give citro carbonate internally or brush the teeth with saturated solution of limewater for three days before presenting for treatment. Correcting malocclusion also aids.

Sensitiveness in grinding—Locate the area with a bristle which is usually very minute, carry 30 per cent.

H₂SO₄ on the bristle to it, count to thirty and neutralize with saturated solution of soda.

Sensitive necks of teeth—1/3 para-formaldehyde powder to 2/3 any good cement powder mixed to a thin consistency and placed over the sensitive area. Flow cement over this and leave for 48 hours.

Elimination of pocket—10 per cent. Teutocain (German) solution applied topically.

The following are signs of incipient Periodontal disease as given by Dr. Box, but do not necessarily follow in this order of sequence—

Sign No. 1. *Graumatio crescent*.—A crescent shaped zone of abnormally deep colour never extending completely across the gingival border of the tooth, and being confined as a rule to a segment about 1/6 of the circumference of the tooth. It may be superimposed over a mild generalized gingivitis, but frequently occurs in an otherwise healthy gingiva. It is considered to be a sign of a localized circulatory disturbance in the pericementum, and is, as a rule, associated with traumatic occlusion.

No. 2. *Congestion of marginal gingiva*.—This zone of congestion extends completely across the gingival border of the tooth. It is regarded as a sign of generalized pericemental circulatory disturbance. It is commonly found in cases exhibiting an end to end occlusion.

No. 3. *Mobility* No. 1.—This is a degree of mobility so slight as to escape casual observation. It requires careful manipulation and the application of considerable digital pressure, in many instances, for its detection. It seems to be associated with rarefying pericementitis fibrosa, since in this disease varying numbers of the pericemental fibres have been replaced by this soft, yielding new tissue.

No. 4. *Recession of the marginal Gingival Line*.—Taking the amelocemental junction as a fixed landmark, it is often found that the gingival

margin shows an altered relationship to this line. In the average case, the margin of the gingiva is approximately two millimeters above the amelo-cemental line. Secession of the gingival margin towards this line is usually indicative of alveolar crest resorption. For example, a recession of the marginal gingiva which just exposes the amelo cemental line will probably indicate a crest resorption of 2 m.m. Exposure of the cementum will indicate an increased alveolar resorption of a corresponding degree.

No. 5. *Asymmetric Secession of the marginal gingival line.*—In many cases, recession of the gingival margin involves only part of the normal gingival line. This may occur in the median lines of the tooth or on either side of this line, thus disturbing the normal symmetry of the curve of the gingival margin. It indicates a localized resorption of the alveolar crest.

No. 6. *Recession of the alveolar Crest Line.*—The crest of the alveolar process in the average normal case is approximately two m.m. below the amelo-cemental line, which has been adopted as a fixed landmark. Disturbance of the normal relationship between these lines is a manifestation of recession of the alveolar crest line. This may usually be detected by careful study of the radiograph.

No. 7. *Increased radiolucency of the alveolar crest or Lamina Dura.*—This is an indication of a rarefaction of the alveolar bone in these locations.

No. 8. *Disturbance of Normal Contour of the Alveolar Crest.*—Frequently the alveolar crest presents in the radiograph a slightly eroded appearance, disturbing its characteristic symmetry. This is due to a localized resorption of the alveolar crest.

No. 9. *Increased widening of the Pericemental Space.*—When complete rarefaction of the lamina dura takes place there is exhibited in the radiograph, in certain zones, a definite widening of the line which represents the pericemental space.

No. 10. *Mobility No. 2.*—When the lamina dura is destroyed to any extent about the tooth, there is, of course, an increase in the soft tissue content between the tooth and the remaining alveolar wall. This naturally permits an increased mobility beyond the normal and beyond that designated as mobility 1.

No. 11. *Shortening of the Crest of the Septal Gingiva.*—When an appreciable resorption of the septal alveolar crest has occurred, there will usually take place a concomitant dropping away of the septal gingiva. This will be evidenced clinically by the appearance of spaces between the teeth which were formerly filled with gingival tissues.

No. 12. *Linear Depressions in the Alveolar Mucosa.*—These lines are often better shown on models than in the mouth, but may usually be demonstrated in the mouth if the light is properly directed and the mucous membrane is dried. They extend parallel to the long axis of the root and overlie the septal bone. These depression lines are to be differentiated from the normal depressions between the alveoli adjoining teeth. These lines are characterized by being sharply drawn.

No. 13. *Stillman's Clefts.*—These are clefts occurring in the gingival border, occasionally in the centre line of the tooth, but more commonly to one side of this line. Two clefts are frequently noted on the same tooth. Although the underlying tooth surface may not be visible, due to the opposition of the divided tissue, it is invariably possible to pass an instrument through any portion of the cleft to the tooth surface. These clefts are regarded as essentially small pockets in which the ulcerative process has extended through to the labial surface of the gingiva.

No. 14. *Absence of Stippling.*—In the normal gingiva the color is not a uniform pink, but presents a translucent stippled appearance of alternating

spots of lighter and darker shade. When the normal gingiva is dried, it presents a somewhat velvety or mossy appearance, indicative, apparently, of a normal circulation in the capillary loops. There is frequently observed a condition in which this mossy, stippled appearance is lost, and the surface is shiny, even when dried, and of a uniform color. This is considered usually to be a sign of oedema in the gingiva.

No. 15. *Festoons*.—When, through the action of a certain grouping of etiologic factors, a hyperplasia of the marginal gingiva is induced, it is frequently manifested clinically by the occurrence of a linear depression outlining the marginal gingiva. The marginal gingiva presents a characteristic uniform thickening, which, however, in the earlier stages, does not involve the margin itself. In the early stages, too, there is no deviation from the normal color. McCall has called attention to the frequent relationship between these festoons and traumatic occlusion.

No. 16. *Injection of Blood vessels in the Marginal Gingiva*. With the aid of an ordinary magnifying glass, there is to be seen, in many cases, a typical dilatation of the blood vessels in the gingival margin. This is to be considered as an indication of early infection in the marginal gingiva.

No. 17. *Increased depth of the Gingival crevice*. The normal gingival

crevice measures in the average case approximately two m.m. Any increase in its depth beyond this point must be regarded with suspicion. It is to be regarded as a sign of early pocket formation in the cemental gingiva. This lesion is to be detected only by the use of a suitable diagnostic probe.

No. 18. *Epithelial Nodules*. There are occasionally to be seen on the surface of the gingivae, small, slightly elevated nodules. They are of a lighter color than the surrounding tissue and in shape are usually round or oval. They usually indicate a period of long standing venous congestion.

No. 19. *Distended Veins in the Mucosa*. In many cases there are to be observed dilated blood vessels of a purplish color, arising in the septal cemental gingiva, and traceable for a considerable distance in the alveolar mucosa. They usually indicate the establishment of infection in the cemental gingiva at the base of the interproximal crevice.

No. 20. *Pus Cells in the Crevicular Exudate*. Frequently, when clinical signs of pus are lacking, and the gingival crevice is of uniform depth, a microscopic examination of the crevicular fluid will reveal the presence of pus cells. This may safely be regarded as evidence of suppurative gingivitis.

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Ottawa.

Dental Assistants are Encouraged

Enthusiasm and energy in carrying on their organization were the points stressed by Doctors Cameron and Dubeau in their addresses before the Montreal Dental Association. The meeting was held in the New Medical Building on the occasion of the association's first anniversary.

At the opening of the meeting, a vote of thanks was passed to Miss Ratner, the secretary, for her untiring efforts on behalf of the association.

Dr. Cameron, Professor of Prosthetic Dentistry at McGill, was introduced as the first speaker. Dr. Cameron expressed the hope that the meetings of the past year had proved beneficial to the members and urged them to attend those of the coming year in the proper frame of mind. The proper attitude said the Doctor, is enthusiasm. They should be eager to glean as much knowledge as possible from the meetings, and thus refresh their previously-gained information, as well as acquiring new knowledge. This, he stated, would keep them from getting into a rut.

Much valuable knowledge may be gleaned from the long study and research of the various noted specialists who have addressed the association during the year. Dr. Cameron compared this to an audience at a concert, enjoying the results of a noted pianist's long years of practice.

The members were urged to take their work seriously. Their work is in a great field, and they can greatly enhance their usefulness and ability by studying and increasing their knowledge. Dr. Cameron urged his audience to enter into the spirit of the meetings. He suggested that the association follow the example of the American Dental Assistants' Association by having the members them-

selves deliver essays at the meetings. Dr. Cameron concluded with a final appeal to the members to be enthusiastic in their work, and wished them all possible success during the coming year.

Dr. Dubeau, Dean of the University of Montreal, then gave an address in French, followed by a few words in English. The keynote of Dr. Dubeau's speech also was enthusiasm and perseverance, especially in regard to the spreading of dental and oral hygiene. An extract from the Carnegie Foundation report was read by the speaker. This extract dealt with the founding of institutions for the instruction of young ladies in dental hygiene. The report was very complimentary to the dental profession for the work accomplished by them in this direction. At the completion of these courses, the students are awarded a diploma, and are fitted to render great service by promoting dental hygiene in schools, and lecturing at women's institutions. These courses consist of a series of lectures during the year.

Dr. Dubeau exhorted his audience to spare no efforts and sacrifices to help prevent contagious diseases among children by teaching hygiene. All school children should have their teeth examined. This duty is sadly neglected in Montreal, there being only one dental inspector for over ninety thousand school children.

Eight universities now have departments for dental hygiene instruction for ladies. There is considerable opposition to this movement in Montreal, but the faculties both at McGill and the University of Montreal are favorable to it. However, if the members of the Society help to push this movement, and can convince the dentists that it is for the public benefit, Dr. Dubeau felt sure that their point would be eventually

carried. The doctor then impressed on his hearers the fact that knowledge of dental and oral hygiene is bound to increase their efficiency. Dr. Dubeau concluded by tendering his best wishes for the continued success of the association.

The election of officers for the

coming year resulted as follows: Miss R. Firth, president; Miss E. A. McKee, first vice-president; Miss J. Desjardins, second vice-president; Miss E. Voisey, English secretary; Miss E. Gobeil, French secretary; Miss E. Moye, recording secretary, and Miss M. MacLean, treasurer.

Food and Physic

Sir John Bland Sutton took as his subject of address "Food and Physic" at the Centenary Celebration of the University of Toronto. He said there were two great systems of life, vegetable and animal. The vegetable got its food directly from the inorganic and the animal from the organic. Before we could assimilate certain inorganic elements they must pass through the vegetable. In matters of physic or medicine like food for the animal it must be taken from the vegetable. Among the medicines were all kinds of concoctions made from animal tissue or refuse. The more distasteful and remote the tissue or substance the more virtue it seemed

to possess. Much has been made of the function of the ductless glands and much has been said of their value as remedies for disease. This is just an old thought in a new form. Extracts are made of ductless secreting glands which are said to cure some of the diseases the ancients cured with similar methods. It is known that thyroid extract will develop the creaton both physically and mentally. Liver is now the cure for pernicious anaemia.

The subject of vitamines is of importance to-day. The ship Challenger which sailed from Portsmouth, England, in 1872 laid the foundation of all recent study in this field.

Dr. Percy Howe at Hamilton

Many fallacies were shattered and much valuable information gleaned when the members of the Hamilton Dental Association last night heard Dr. Percy Howe, head of the Forsyth Dentistry Research Institution of Boston, and a man of international note in dental circles. The meeting was the inaugural one of the season and many figures prominent in the dental and medical life of Hamilton and Toronto were present.

The meeting, which was illustrated by slides, was held in the Royal Connaught hotel. Dr. B. L. Field presided, and the speaker was introduced by Dr. W. W. Seccombe, president of the Royal College of Dental Surgeons.

Dr. Howe, who has engaged in research work for years, and who was engaged in this work when affiliated with the medical and dental faculties of Harvard university, said in part: "The study of dentistry formerly engaged itself merely with the teeth, but now it has a much wider field, and must include in its scope the dietetic problems. In former years research workers concentrated their studies on extracted teeth. In all biological work of any value the work has been done on the living organ or animal. Decay in teeth first attacks the outer fortifications, and it advances in the same proportion as the consumption of sugar increases. In my experiments it has been proved that the consumption of cane sugar plays a major part in the decay of the teeth. The tooth brush, while a commendable measure, is not as useful as is commonly thought in the elimination of decay. We must search for more fundamental reasons. My experiments on monkeys showed that, did the monkey live on an abnormal diet, the teeth were abnormal. The proper food was not con-

sumed and thus bone structures were not manufactured."

Views of Skulls

Dr. Howe showed views of the skulls and teeth of monkeys that had been properly and improperly fed. The comparisons of the growth were both significant and striking, the properly fed monkeys having a much greater cranial development than those improperly fed. He also told of injecting stains into various animals, and of seeing, a short time later, the same stains appear on the teeth, thus proving that there was a slight circulation of blood in the tooth.

"We think too much about the prisms, the unorganic substance that composes the tooth," he said. "And not enough about the glucose substance that holds the prisms together. The poisons of the body are excreted into the mouth and this is largely responsible for defective teeth, along with a defective bone growth.

"I found that a milk, fruit and vegetable diet was a good one for the teeth. Milk alone is of no substantial value, however, the protein and calcium of pasteurized milk having been destroyed or impaired in its treatment. We must have plant food, and by this I do not mean only cereals, for they are made of the seed, and that is only a part of the plant."

Bone-Building

He showed the beneficial effect of milk combined with orange juice in a diet, and also the bone-building value of butter and vegetables.

"Many diseases, in fact almost all, are attributed to the teeth. That is a fallacy. What we must seek to build is tissue integrity, and thousands of good teeth have been pulled in the belief that it would cure ills. The fact remains that our mothers didn't feed us right, for a good,

sound body and good sound teeth go together."

He showed views of the tooth of a child. The tooth had been broken and a temporary crown had been placed on it. In a couple of months the crown had become part of the tooth, nature welding it.

The most interesting part of the paper was then read, that on dietetics. "Whenever a boy is hungry feed him," urged the doctor. "The child requires ten times as much food per unit as the adult. But he must be properly fed on a diet that will build and not, as so many of our children, on a sugar diet.

"Our mothers do not nurse their

children long enough. Why is it that man, of all the animals, should alone be subjected to bad teeth and bodily ailments? Why is it that the Eskimos and the people of the Himalayas are of such sturdy build? Because they are nursed on the breast until two or three years of age. American mothers would not think of doing this. We do not want concentrated foods, but bulky, coarse foods that give that so desirable feeling of well-being after a meal. This will improve the muscles. Meats and cereals from mineral acids and something must be found to neutralize the effects of these. Green, raw foods will do this."

Deaths Under Anaesthetic

Two deaths have recently occurred in connection with the administration of ether by a physician for the extraction of teeth by a dentist, one in Oshawa and one in London, Ont. The jury in each case found no blame to the dentist, while in one case the suggestion was made that the anaesthetist should not leave until the patient had fully recovered. The anesthetic was given in the home in one case and in the dentist's office in the other. As

we have often said before, some day the extraction of several teeth at one time will be looked upon as a major operation. Shock and too much anesthetic are common causes of death. Gas and a few teeth at a time is safer practice. The newspaper heading said the dentist was not to blame. If the patient had died at his home the heading would have been the physician was not to blame.

SOCIETIES

Minutes of Meeting of the Canadian and Ontario Dental Association held at the King Edward Hotel on Monday, May 16th, at 2 p.m.

Dr. J. A. Bothwell, of Toronto, President of the Toronto Dental Association, acted as Chairman.

Dr. Bothwell, after the opening remarks of welcome of this year, the Diamond Jubilee, introduced Thomas Foster, the Mayor of Toronto.

The Mayor then gave his address of welcome. He extended a warm greeting to all the members from all parts of Ontario and of the other provinces, and remarked that the work they were undertaking was of very high-class quality; it was a work that had to do with every family and every person in the community and that it was impossible to get along without the dentists. He hoped they would take a special interest in Toronto at this particular time, this being the Diamond Jubilee year, and he hoped many would come back to join in the July 1st demonstrations. He further remarked that their being here was to exchange ideas and to develop improvements in connection with the profession. Some had been in practice for many years; that it must be very interesting to have the knowledge that has developed in the last two or three years, and after the convention to return to their own communities, benefitted by these improvements and better for their visit and trip to Toronto. In his closing remarks the Mayor expressed delight in welcoming the association, and in

extending the freedom of the city while they remained.

Dr. J. W. Clay, President of the Ontario Dental Association, was called upon to reply to the Mayor's address.

Dr. Clay, after addressing the meeting, remarked: "It is not always that pleasure and duty go hand in hand." He considered the present such an occasion, when the opportunity was afforded him to reply to the welcome expressed by His Worship the Mayor. His kindly words of welcome were appreciated by all the visitors to the City of Toronto, from the various provinces.

He further remarked that it was well that the dentists of Canada should hold their principal meetings either in Toronto or Montreal, as these cities had been the chief centres in the history of dental advancement in the Dominion of Canada.

He further expressed appreciation for the provision of suitable quarters and the opportunity afforded for meeting friends and obtaining professional information. He also thanked the Mayor for his cordial invitation to accept the hospitality of the city, and speaking on behalf of the visitors, he could safely say that they would enjoy themselves to the fullest extent.

It was moved by Dr. F. J. Conboy, and seconded by Dr. W. Seccombe, that the program submitted be the official order of business for this convention. Carried.

The Chairman then called on Dr. A. W. Winnett, of Kingston, Vice-President of the Ontario Dental Association, to take the chair.

Dr. J. A. Bothwell, President of the Ontario Association, was then called upon, and he gave his address for 1927.

It was moved by Dr. J. C. Devitt, seconded by Dr. Clarke, that the address of the president receive a place in the minutes of the Ontario Dental Association. Carried.

Dr. Bothwell at this juncture presented the association with a handsome gavel and said in part:

"For ten years I have had much joy in serving this association. I have seen it through a decade of wonderful progress. I have been its president through this, its Diamond Jubilee year. To commemorate this milestone in the history of the association and to materially express my appreciation of the honor paid me in giving me the presidency, I ask you to accept this small gift, the donation of which affords me unlimited pleasure."

Dr. Winnett, Vice-President, accepted the gavel on behalf of the Association and he expressed their appreciation for this beautiful gift from the president.

He felt certain that the gavel would be used for calling to order many such illustrious gatherings as were assembled to-day.

Addressing the members of the Ontario Dental Association and our American clinicians and essayists who so kindly had come to Toronto to assist in making this convention a memorable one, he congratulated Dr. Bothwell on being president of the Ontario Dental Association through this, our Diamond Jubilee, also that they had associated with the Ontario Dental Association, the Dominion Dental Association which was represented on the platform by Dr. Clay, of Calgary. He expressed the hope that it would be a Diamond Jubilee,

not only in members, but also in the good which may be derived by each and every member from this convention, taking great benefit back to their homes from the clinics and papers which they would receive.

He again expressed the great pleasure in accepting the gift from Dr. J. A. Bothwell on behalf of the Ontario Dental Association.

At this point, the Nominating Committee was named as follows:

Dr. Willard Armstrong, Richmond Hill.

Dr. A. O. Marshall, Belleville.

Dr. W. A. Armstrong, Ottawa.

Dr. M. A. Ross Thomas, London.

Dr. F. P. Moore, Hamilton.

Dr. W. Willmott was then called upon.

Dr. Willmott reported that at the last meeting of the Canadian Dental Association he had been appointed a Committee of one, and as such had written the secretaries of the different provinces to ascertain the names of those practitioners who had died during the last year. The members stood in silence while the names were read and the last post was sounded.

Dr. C. N. Johnston, of Chicago, was then called on and gave his very interesting address on "What of the Future."

The president then asked if there were any discussions of Dr. Johnson's paper.

Dr. Gallie replied to say, "what more could anyone say, after listening to the splendid address of Dr. Johnston, and realizing the hope and faith that he has in the future, we are convinced that not a word could be added to the address.—It is a classic."

The president then, on behalf of the association, thanked Dr. Johnson for the presentation of his wonderful paper.

Dr. Robert H. Ivy, of Philadelphia, was then called upon and gave his address on "A Complete Mouth Exam-

ination for the removal of all Dental Infection."

Dr. Ivy's paper was illustrated by lantern slides.

The president called upon Dr. Fulton Resdon to open the discussion on Dr. Ivy's paper.

We are always glad to have our friends from across the border come to our meetings; but in Dr. Ivy's case there is more cause for rejoicing, as he is of British birth.

Dr. Ivy always brings something of special interest, and because of his wide experience, and further because of his association with one of the fathers of oral surgery on this continent—Dr. Cryer—he is especially fitted for the teaching of oral surgery. He is kind enough to come, not only with a paper, but he is giving clinics every morning of this week, and I am sure that we shall be well rewarded for attending them.

There is not much room for a discussion, because Dr. Ivy has introduced little of a controversial nature, and in a sense his paper is rather text-book in type, covering a large amount of the surgery spoken of as Oral Surgery. I note an undertone throughout the paper urging that men doing oral surgery should be well trained, and that in this country they

are being born over night, with a minimum amount of training. He emphasized the necessity of rigid sterilization, and that the boiling of instruments is the method of choice for office use to prevent mixed infection.

I hoped to hear Dr. Ivy describe more fully the dental cyst, as we feel there are two types, one which is lined by squamous epithelium, likely due to residual squamous cells being stimulated by periapical infection, and the other lined by columnar epithelium, which is of the cell-rest type. This problem has interested me for years, and is only of importance from a scientific standpoint.

As to his outline, of the treatment for other conditions, I am in accord with him, and can only say that we welcome him as an old friend; and to those who do not know him, I would suggest that they become acquainted with him at the earliest opportunity.

Mr. President, I thank you for this opportunity afforded me of opening the discussion of Dr. Ivy's paper.

The president then asked if there were any further discussions—and thanked Dr. Ivy on behalf of the association for the presentation of his paper which had, he remarked, covered the ground thoroughly.

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Balance received from Dr.	
E. A. Grant	\$1005.21
Interest	32.66
Receipts from 1926 Convention	2463.69

\$3501.56

Expenditures.

Exchange on cheques	\$ 1.25
Florist, wreath	10.00
Stationery and printing ..	229.92

Stenographic and clerical .	85.05
Fyling cabinet	15.00
Postage and telegrams	116.36
Convention expenses	1969.20
Honorarium, Sec.-Treas. ...	250.00
Balance in Bank of Nova Scotia	824.78

Audited.

\$3501.56

(Signed), C. A. Chudleigh.

J. Stanley Bagnall,

Victoria Dental Society Meets

An interesting and profitable meeting was held by the Victoria Dental Society last evening in the rooms of the Victoria Medical Society, with the president, Dr. J. Calvin Forte, occupying the chair. Following the transaction of general business a clinical session was held, when Dr. W. S. Gibson gave a demonstration on gold castings, using the "Whip-Mix" machine, one of the latest developments in dental casting devices. The clinic included the casting of gold inlays and the tech-

nique for gold dentures, illustrated with models prepared for the occasion. Mr. Hudson Glenesk, representing the Ash Temple Supply Company, of Vancouver, was a visitor at the meeting. The members of the society in attendance were Drs. J. C. Foote, T. H. Johns, A. J. Garesche, H. J. Henderson, W. S. Gibson, A. J. Thomas, W. N. Gunning, W. Russell, C. N. Westwood, A. McCarter, A. Fraser, D. W. Webster, E. W. Hetherington, S. Youlden and C. Mess.

Ottawa Dental Society

The Ottawa Dental Society held its first meeting of the season at the Rivermead Golf Club on October the eighth.

The Executive Committee, recognizing that the present position of Dentistry is one of such rapid progress that it takes every effort to keep up with the procession, decided that certain social and cultural holidays were necessary to ease the professional pressure.

The result of this thought was that this function was a Dinner-Dance-Bridge Party at which "Shop" was strictly taboo.

After a *recherche* repast served in the Rivermead's best style the first item was the presentation of an illuminated address and a gold-mounted cane to Dr. S. S. Davidson in recognition of his long and efficient ser-

vices to the profession in various official capacities.

Doctor Davidson was taken completely by surprise but rose to the occasion with his customary ready wit, fully justifying his popularity amongst his confreres.

Another surprise was the advent of the Ottawa Dental Society Glee Club, a double quartette, which, under the leadership of Dr. Archie Grace rendered many fine numbers. Dr. P. L. Nesbitt as vocal soloist also achieved distinction.

There were dinner prizes, which caused much merriment, dance prizes and bridge prizes all adding to the gaiety of the occasion. By a standing vote it was decided unanimously to make this an annual affair. The President, Dr. Lorne MacLachlan, occupied the chair.

Good Will from Australia to Canada

PERCY ASH, D.D.S.

Dr. Percy Ash, Sydney, Australia, delivered an interesting address to the students and staff of the faculty of Dentistry, Toronto, on the occasion of his visit to Canada to represent Sydney University at the Centenary celebrations of University of Toronto.

In his address he told of the many subjects which he touched upon in his course. Being a lawyer before he studied dentistry it was natural that he should give a course of lectures on Jurisprudence. Being versed in commerce and finance he lectures on book-keeping, accountancy and business forms. Being a dentist he lectures on the theories of dentistry rather than the technique. Being an editor he naturally directs the students' reading and study of dental literature.

He said students often asked the question "Why should I have to study so many subjects which have apparently no direct bearing on the subject of filling teeth or replacing lost tooth structure?" His answer was the faculty, the profession and wiser heads than they, had, after much thought decided upon the present course.

Among other things he said that the law knew no dental jurisprudence and that he taught medical jurisprudence and applied it to dentistry.

He pointed out that the current dental literature was really of more value to the growing dentist than the text books but the text books were essential for foundational studies and ready reference. The Miller theory of dental caries was expounded and supported, but pointed out that it did not meet all the requirements of a solution of the problem. He defended the practice of teaching students the full history of all the theories of dental caries.

In a few words on diet and decay of teeth he said both Pickrel and Sim Wallace were aiming to provide one diet which would suit all people forgetting that "what is one man's meat might be another's poison."

Susceptibility and immunity as well as heredity came in for a few interesting comments. In closing he referred to his long trip to Canada, his pleasant reception, his lasting memories, good will and greetings from his home land.

Dental Research in England

While much is being done by dental research in America still more is being prepared for in Great Britain. The method of organization of the profession in 1921 has provided large sums of money to be spent in education and research. We quote a few paragraphs from an address by Sir Walter Fletcher, K.B.E., F.R.S., at the opening of the "John Hampton Hale

Research Laboratory," London, Oct. 4, 1927.

"This new laboratory is undoubtedly a valuable addition to the School; but the significance of our ceremony today goes far beyond that. The laboratory is an outward and visible expression, perhaps the first which the public has had an opportunity of noting, of a new and very striking move-

ment in the dental profession. I doubt very much whether the general public have any conception of the new policy by which the members of the dental profession are themselves directly supporting and prompting both education and research in the art and in the sciences of dentistry. Under the provisions made by the Dental Board, every practitioner registered since 1921 pays not only a registration fee but also an annual fee for retention on the Register. As the Register grows, the body of contributors to the fund will grow and eventually the whole profession will be included. The fund already amounts to about £40,000 a year and this is spent under the management of the Board in promoting education and research. Dental education is promoted by assistance given to able students needing it, by the provision of "refresher" courses for practitioners seeking them in special directions, and in other ways. Dental research is aided by grants made to workers under approved schemes.

The public ought not to fail to notice and to appreciate this most honorable and enlightened policy of the dental profession, at present almost unique in its kind. It will be seen that the dental practitioners are directly contributing with good-will to a Fund for promoting the two great movements that in a narrow view might seem to be most damaging to their immediate self-interest,—first, that of education, which is designed to bring into the competitive field against them the ablest and best equipped rivals; and second, that of research, of which the deliberate aim is to prevent dental surgeons, so far as is possible, from having any work to do at all. Could there be a more notable example of public-spirited altruism?

Both these great movements, thus supported by the profession itself—that towards the improvement and accessibility of professional education, and that towards the advance of knowledge by research—are move-

ments made in the best interests of the profession, viewed narrowly and selfishly, but they will inevitably promote the honor of the profession that identifies itself in this way with the common interest, and will deserve and receive general admiration as they become increasingly known.

Now that the lead has been given by the dental profession, we may all wish that admiration of their movement by other professions may presently stimulate imitation. Supposing members of the medical profession each paid a small annual contribution in recognition of the privileges given them by registration, and that the fund so produced was devoted, in the high spirit of altruism, to the interests of the public, by being used to promote improved and better sustained medical education, and in gaining improved medical knowledge through research. Do you realize that if each doctor in the United Kingdom contributed what each dentist now contributes, there would be a fund of no less than a quarter of a million sterling annually for medical education, whether undergraduate or post-graduate, and for medical research? A fund of that kind might aid notably in the solution of some long-standing, but pressing national problems of post-graduate education in medicine.

Important and hopeful as is the new policy framed and financed for the profession by the Dental Board, we cannot properly appraise its value in this time of sowing. The harvest time is still to come. This is most obviously true in the field of professional education. It is true, too in the field of dental research, and yet here we can already see, even in these early days, some beginnings of an actual harvest and the rich promise of more to come.

In framing their research policy the Dental Board have recognized that, however precise and limited are many of the special practical aims to which dental research is directed, the scientific work by which alone these aims

can be realized must have complete liberty of range, if it is to be new and progressive, and must be free to bring into contribution any suitable parts of the great primary sciences. In the important technical field of reparative dentistry they have entered into co-operation with the Department of Scientific and Industrial Research, and

for study of their special problems in mechanics, metallurgy and refractory materials, have thus taken into alliance the whole system of scientific effort throughout the country with which that department is in touch. I believe that definite and valuable gains of a practical kind have already been the result even at this early date.

Importance of Dentistry

The responsibility of an individual in so far as his duty to assist those in need is concerned is determined by his ability to serve. The wealthy man is under greater obligation to help his less fortunate fellows than the man of the moderate means, and the person who has received a special training which enables him to render an important and much-needed service has a more urgent duty in this connection than the ordinary workman. This responsibility is all the more outstanding when the service which the individual or group of individuals can render has to do with the health and happiness of the people. It is in this group that we who are engaged in preventing dental disease and providing proper treatment for these conditions are included, and our responsibility is all the more pronounced because of the fact that we operate under a license system. Only those who have taken a prescribed course and received a certificate can practice dentistry. This group of individuals must provide the necessary treatment or many worthy citizens will be deprived of that which they have a right to receive. Consequently we who are engaged in any branch of dentistry are brought face to face with the necessity of accepting a fair share of the responsibility for providing an adequate and efficient ser-

vice which will be within the reach of all worthy members of society. **But the full burden cannot be placed upon our shoulders, the state and private philanthropy must accept their share, and it is only by a sane and reasonable plan of co-operation and co-ordination that satisfactory results can be achieved.** It was with this idea in view that the new Ontario Dental Department was established and the chief work of the Director of Dental Services is to impress upon the various governments, both Provincial and Municipal, upon philanthropic organizations and individuals, and upon the members of the dental profession and all associated with it the self evident fact that they each have a great responsibility in this work, and to so correlate their efforts that the best results may be obtained. I will outline the activities which we hope will enable us to accomplish this worthy purpose.

But first I would like to stress the fact that dentistry has an important place in an efficient and up to date public welfare programme. All intelligent people appreciate the importance of health both from the standpoint of the individual and the state. From the standpoint of the individual it must be admitted by all that the person who has lost this treasure has lost that in comparison

with which all other possessions sink into insignificance, and the recent war conclusively proved that, from the national standpoint, the health of the people was the thing of paramount importance.

The great outstanding feature of all health education and treatment is prevention. Cure of course is very important, but at best it is but the repairing of damage already done, while prevention accomplishes a better result without pain, distress and concomitant expense. It is in connection with the prevention of disease that dentistry plays such an important part, because dental disorders are not only serious and oftentimes painful in themselves but may be numbered among the main causes and precursors of disease in general.

This theory was presented many years ago when Pierre Fauchard in his great book upon dental diseases devoted considerable space to the amplification of the fact that dental disorders do cause systemic lesions, but it remained for Sir Wm. Hunter of England two hundred years later to bring to attention of the dentists the alarming information that much of the work which was being done was doing more harm than good, and that dental infection was a real menace to health.

This important announcement made by Hunter led to much research and investigation, and is now conceded by all modern health authorities that dental conditions do to a very large extent determine the health of the people and that no public health organization can function efficiently without paying attention to this outstanding factor.

In the Journal of the American Medical Association, Sept 15, 1923, there is a report from their London correspondent, under the sub-title "The Dental Condition of the Population," calling attention to a report from a Government committee as

follows: "It is now known on the authority of a Government Committee's report that one-third of all diseases in the country was due directly or indirectly to dental diseases."

Dental diseases cause systemic disorders in a variety of ways, and I would like to refresh your memories by mentioning a few. The most outstanding is focal infection, the bacteria and toxins from abscess areas at root ends and pyorrhea pockets entering the circulation and being carried to some other part of the body where a secondary lesion is started. There appears to be no escape from the conclusion that many of the degenerative diseases which appear to be on the increase have as one of their important, and in many cases their chief causative factor, dental infection. It is probably seldom the case that dental infection is the only contributing factor, but when you take into consideration the fact that the great majority of adult individuals are carrying seriously infected teeth, potentially capable of producing degenerative disease if the local and systemic quarantine breaks down, you must come to the conclusion that this condition is one that merits serious consideration. It has been well established that the strains of organisms which are found in the great majority of heart, kidney, joint and muscle and nerve lesions, can also be recognized in the dental foci. We are therefore justified in coming to the conclusion that careful and proper dental treatment will do much to improve the general health.

The second consideration is the presence of large quantities of bacteria in the neglected mouth. It is a veritable breeding place for disease germs, and these must have a most detrimental effect upon the physical welfare. We are and should be very

(Continued on page 394)

Editorial

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Vol. XXXIX

TORONTO, DECEMBER, 1927

No. 12

The Function of the Dominion Dental Council

The question will arise sometime soon as to what organized body of dentists in Canada should direct the affairs of dentistry. At the present time there are voluntary dental societies and legal dental Boards or Councils. The voluntary societies are rapidly gaining in numbers and in organization. The legal bodies are sitting back and allowing the more aggressive organizations to speak for dentistry. If dentistry is to be represented abroad a representative of the Canadian Dental Association or some provincial voluntary society goes, while as a matter of fact he does not represent ten per cent. of the profession, while a representative of the legal societies or Boards would represent all the profession. If dentistry wishes to interview the Dominion Government on a military or public health problem it is some voluntary organization that takes the matter in hand. The provincial Boards or Councils should come forth and speak and act for the profession. It should be the function of the Dominion Dental Council to direct, control, manage and speak for the dental profession of Canada. Voluntary societies should not be expected to do such things. Theirs should be social, intellectual and educational.

Another Viewpoint

The August number of the Dominion Dental Journal reported an address given by the President of the Canadian Dental Association at its May meeting. In reading over the message one can detect a note of warning that impending changes vital to Canadian dentistry are about to take place; said changes to involve both the Canadian Dental Association and the Dominion Dental Council. A suggestion was noted that the Canadian Dental Association as a true mouthpiece for Canadian dentistry had failed to function properly and somehow the destiny of the D. D. C. had become entangled with that of the voluntary Canadian Dental Association.

I would like to respectfully submit that the Canadian Dental Association has done as well as any group could do or any re-organized body can do, to speak for all Canada. Should the Canadian Dental Association have been unable to unify dentistry in Canada, it is not the fault of the Canadian Dental Association but owes a large part of its disability to that potent factor that separates our country into five great natural subdivisions. Geography. Further, I wish to forecast that this same factor will tend to nullify the efforts of any dental association that tries to handle affairs for all Canada, to any great degree. The natural barriers are too large; the distances too great, *"Canada has been created in defiance of Geography. It is not a natural unit and never can be. The maritimes stand off by themselves; Ontario and Quebec are one geographically, but are divided by race. The prairies are a distinct block and beyond the barrier of the Rockies lies British Columbia. They lie in the worst possible relationship to each other. This division of our country should give us grave concern. Each part has its own peculiar interests and they clash."* (Professor Burt, Alberta University). Just compare the thought of the above quotation with the dental groups that have sprung up in Canada. The Maritimes, Quebec, Ontario, British Columbia, and the latest addition to the number, the Dental Society of Western Canada. These societies have been a result of dental growing pains in each natural geographic section of Canada, and, in every part, as the result of this organizing splendid progress has been made and will continue, along dental lines. But in the past, so in the future, any meeting of the Canadian Dental Association can be no more than a gathering together of dentists in the particular locality in which the meeting is held.

In the older profession of Medicine, two separate and distinct bodies carry on clearly defined work for their profession, the Medical Council of Canada qualifies men for acceptance as a registration throughout the Dominion while the Canadian Medical Association concerns itself with

disseminating medical news and knowledge to practitioners by means of clinics, papers, periodicals, etc. These societies are quite separate, one does not report to the other, each limits itself to its special work, and large numbers of the best men in Canada are interested in and actually carrying on, the separated work of each group. In dentistry what have we now? A wish to further dentistry rather than personal advancement caused Canadian dental pioneers to create a thread that strings our Provincial Dental Boards together for a common laudable purpose, that of vouching for men of suitable skill and ethics so that such may re-locate with the minimum of trouble if and when they so desire. Time and effort secured proper legislative recognition of this Dominion Dental Council in eight provincial dental acts, and to-day seven of nine provinces freely interchange licenses through this medium. At a time when this Council should be celebrating its maturity and entering vigorously into that leadership, its name implies it seems to be hesitating and like Micawber, "waiting for something to turn up". Is this something in any way connected with the Canadian Dental Association? This Association has never had its function clearly defined but has managed to meet at the same time as the Dominion Dental Council, which by the way, is the only body recognized by the provincial law. Differing from the medical bodies, reports are handed from one to the other till the ordinary garden variety of dentist is puzzled like the two black crows as to "who is the head man 'at house".

A perusal of the letter-heads of the two Associations shows that the business of both has been gradually passing into the hands of one small body of men with a consequent slowing up of the activities of both. A reorganization of this Canadian Dental Association was undertaken and in the preamble it certainly seems that some of the functions of the Dominion Dental Council have been usurped. Should a merging be attempted or the Dominion Dental Council be threatened with becoming a subsidiary to this new body whose future is so problematic; then, it behooves the Provincial Boards to look the situation over very carefully. Though the Dominion Dental Council has many weaknesses they can be remedied; though the organization has never lived up to its name nevertheless it has worked sufficiently long enough to show its absolute necessity, and since it is the only body of interest to the Provincial Boards it behooves those groups to see that this Council is left alone, its position clearly defined, the structure so laboriously erected, strengthened rather than weakened and that it is neither absorbed by or rendered subsidiary to any other body. It has been in successful operation long enough to have demonstrated its value and has earned an independent, clearly defined position as the only Canadian Dental Body that has stood the test of time and performed the function for which it was created.

L. M.

DOMINION DENTAL JOURNAL

(Official Organ of all Dental Associations in Canada)

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1927

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Academy of Dentistry, Toronto

To the Dental Profession of the City of Toronto:

The Executive of the Academy of Dentistry wish to bring to your notice the following Synopsis of the Chairman's report of the Oral Hygiene Committee of the Academy for your earnest consideration.

This important question will be opened for a thorough discussion at a subsequent meeting of the Academy.

Free Dentistry for the poor, probably the most important matter in Oral Hygiene since the establishment of free dental service in the Public Schools.

The following resolution was passed by the Oral Hygiene Committee:—

(1a) That indigent people of the city should receive free necessary dental service.

(1b) That all Hospitals which are under the authorization of the Hospitals Commission to receive Civic and Municipal grants, should be the place for these Clinics.

(1c) That the Dental profession of the City of Toronto should act in an advisory capacity, working in conjunction with those who are paying for the services. Besides paid full time men, the profession should volunteer their services gratis, to man the Clinics.

The third stated meeting of the Academy of Dentistry, Toronto, was a clinic meeting held at the R.C.D.S., 240 College St., Monday December 12th, 8 p.m.

The following clinicians prepared a worth-while programme.

Dr. W. J. Hill, "Orthodontia for the General Practitioner."

Dr. R. Gordon McLean, "Business Principles in Dental Practice."

Dr. A. D. A. Mason, "Double Diagnosis."

Dr. C. Alvin Snell, "Discussion of some of the Problems of Interest in the Treatment of Periclasia."

A PERSONAL STATEMENT TO MY CONFRERES.

During the past summer the Toronto daily press carried advertisements of a dentist named Henderson, of Gerrard Street, that have caused me much embarrassment, owing to many of my friends associating me with these unethical announcements.

Only recently I learned of members of the Medical and Dental professions who have been laboring under a similar misapprehension.

As I have been engaged in ethical dental practice in the City of Toronto for thirty years, during twenty years of which I have been specializing in Exodontia, I trust this personal statement may prevent any further confusion resulting from this similarity of names.

Fraternally yours,
R. H. HENDERSON.

Professional men who have a special training in one direction are prone to give out information which is far from the truth concerning professional matters. They intend to leave an impression of importance, wisdom and learning about abstruse subjects which no one knows anything about but themselves. In the long run, the truth about everything concerning disease and its treatment will bring its reward. Why tell patients whole strings of stuff about what is going to happen to them if they continue to do this or that?

Meeting Today's Dental Exactments

In a Film-Removing Agent

The Vital Claim Made for Pepsodent by Its Makers

THE makers of Pepsodent have but one thought in mind; one goal to strive for in their product.

That is, to supply the profession with a tooth paste that embodies the **LATEST** scientific findings in a dentifrice; findings based on the **dominant dental opinion of TODAY.**

Thus, in Pepsodent, you find what the profession itself holds as embodying the present-day ideal in a dentifrice.

Hence the Pepsodent formula is ever being further improved. Important changes within the last five years, have been made. As the profession advances, Pepsodent advances with it.

Today it offers the most recent exactments of the profession in the harmless removal of the mucin plaque—or film—from teeth; the film which the profession largely holds responsible for tooth decay and pyorrhea; in firming and giving tonal quality to the gums, and in other ways.

Those exactments call for 9 distinct factors today. And these are today embodied in Pepsodent. Should these exactments call tomorrow for other factors, you will find them tomorrow in Pepsodent.

May we send you a full-size tube to try, together with recent data and literature? Just mail the coupon.

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V-712, 191 George St., Toronto 2, Ont., Can.

Please send me, free of charge, one regular 50-cent size tube of Pepsodent, with literature and formula.

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Enclose card or letterhead

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Notes

Public Health depends upon public co-operation.

The Lady Ross Chapter of the I. O. D. E. are dispensing charity in the form of artificial dentures to soldiers.

The local council of women of Toronto want a woman dentist appointed to care for the women in the Mercer reformatory for women.

We wonder how much the orange growers have to do with the great boom in the use of oranges as a health giver. Just why oranges should suddenly have such health-giving virtues makes one suspicious.

At the monthly meeting of the Toronto Dental Assistants' Association held at the W. C. T. U. recently Mrs. Kathline James are chosen corresponding secretary with Edith W. Brown as publicity agent.

A public speaker on Dental subjects at the Detroit meeting has gained some notoriety by saying that there are less than twenty perfect sets of teeth in America. One is driven to ask upon what standard such a statement is made. It is like saying there are not a hundred perfect blades of grass in certain fields.

Among the many useful dental

subjects discussed in the Manitoba Free Press appears one on dentistry and the pregnant woman. The teachings are sane, reasonable and within the understanding of a person. The article recommends women not to neglect their teeth at such times but to visit the dentist more frequently than at other times because of the more frequent occurrence of caries.

The municipality of St. Vital (Winnipeg) is gathering money to establish a dental clinic.

The report of the Toronto Western Hospital says the Dental Department gave 9045 treatments last year.

The Ontario Dental Association is undertaking the laudable task of making its membership permanent. By so doing the association will have an assurance of its existence and its membership.

Dr. D. M. Graham of Detroit, died November 2nd, 1927, and was buried in Woodland cemetery, Glencoe, Ontario, in which place he was born and educated. Dr. Graham was widely known in dentistry and at one time gave an address before the Toronto Dental Society.

FOR SALE—Dental practice, Border Cities, doing \$10,000 per year. Owner going into manufacturing business in Chicago. Box 51, Dental Journal, 73 Richmond W., Toronto.

FOR SALE—Ritter Lathe, Burns Casting Machine, Buffalo Vulcanizer, Ritter air compressor. Box 52, Dental Journal, 73 Richmond W., Toronto.

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IMPORTANCE OF DENTISTRY

(Continued from page 384)

careful in regard to sanitation, filthy conditions must be cleaned up, food must be protected, and all dishes properly washed, but after all these precautions we allow the food to pass through a mouth so filthy that a proper appreciation of the condition would cause repulsion. The bacteria toxins and debris are carried down with the food and must at times cause serious inflammatory conditions of the lining of the alimentary canal. Decayed teeth may also harbor the germs which cause the contagious diseases, and it has been conclusively proven that the neglected mouth is a rampant source of infection. Indeed, this must be so or sterilization is a myth and sanitation a waste of time and effort.

It is quite unnecessary for me to urge the importance of proper mastication. From the standpoint of digestion as well as preventive dentistry, thorough chewing of the food is essential. The adequate mastication of coarse fibrous foods provides natural cleansing for the teeth and the stimulation which will keep the gums in a healthy condition. The exercise of the parts causes a healthy blood supply, which provides tissue repair and development. When children because of sore teeth are unable to properly chew their food they develop the habit of bolting, which remains with them throughout adult life, often causing indigestion, malnutrition and lessened resistance to disease.

The unerupted or impacted tooth presents a problem which demands attention. Locked in its bony enclosure, ever trying to come into proper position and obstructed by another tooth, it exerts a pressure which causes serious nervous disorders. Many indefinitely located pains are

caused by these teeth, and even patients suffering from mental diseases have shown wonderful improvement after their removal.

I do not need to stress the danger of allowing sharp edges of teeth or old roots to irritate the tissues of the mouth. We all know that many tumors, including those that are malignant, have been caused by such irritation. Dr. Bloodgood, of Johns Hopkins University, made this statement. "Cancer of the mouth will be a thing of the past when the public understands and acts on thorough mouth hygiene."

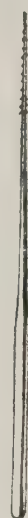
The acute abscess and the neuralgia from an exposed pulp need no emphasis, the pain and distress is so marked that the sufferer demands immediate attention, unfortunately the general public are not aware of the fact that it is the chronic abscess which causes no discomfort that is most dangerous.

A tooth may be serviceable and free from pain, and yet have an area of infection at the root end which is a distinct menace to health; and the size of the area of rarefaction is not the important consideration. A small area in one patient will do far more harm than a large one in a patient with better resistance. Some people can carry a large amount of focal infection. They have strong resistance and are taking care of themselves in other ways, but that is no guarantee that another person can safely take the same chances or that the same individual can continue to withstand the infection indefinitely. Some overload in the form of a mild illness, overwork, or worry, may present itself, and the enemy will then have an opportunity to make a successful attack. The only safety lies in the removal of dental infection. (To Be Continued)

PRUDENCE INDICATES THE USE OF



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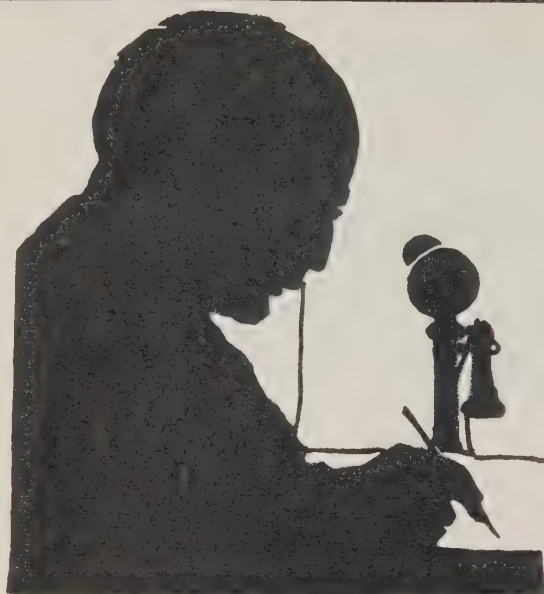
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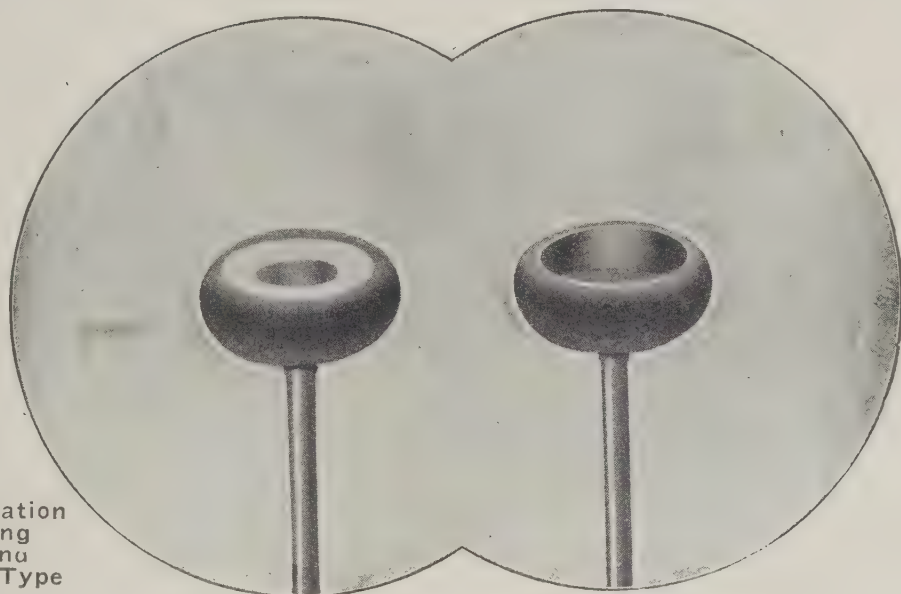


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magnified.

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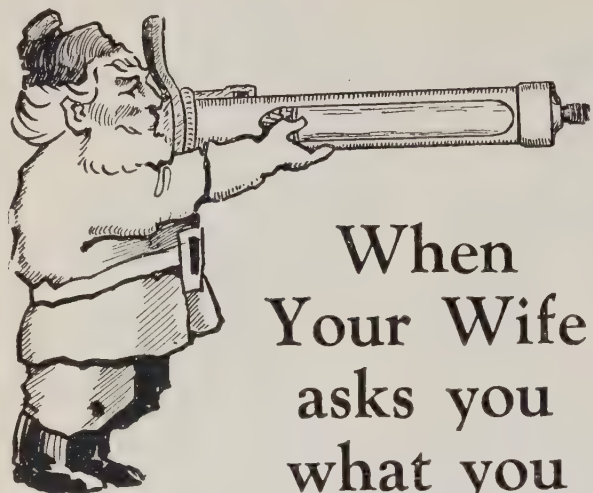
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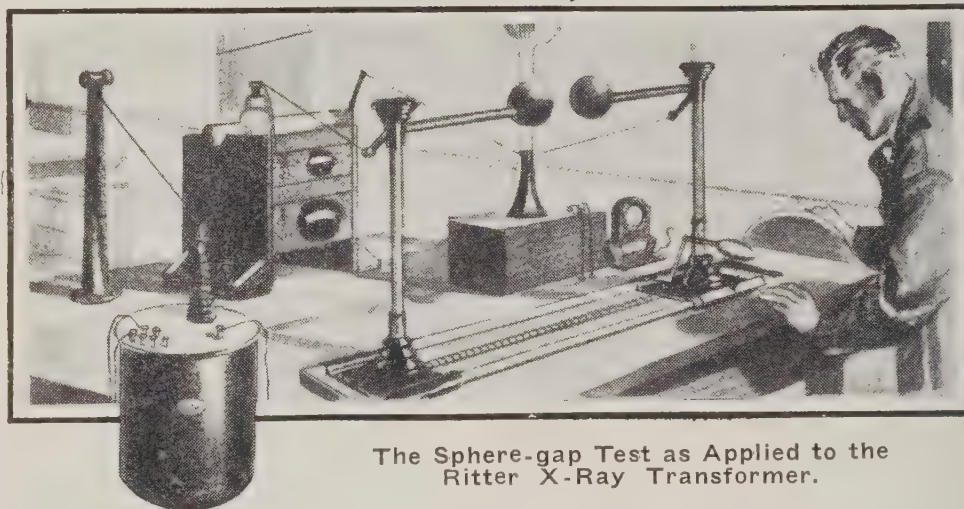
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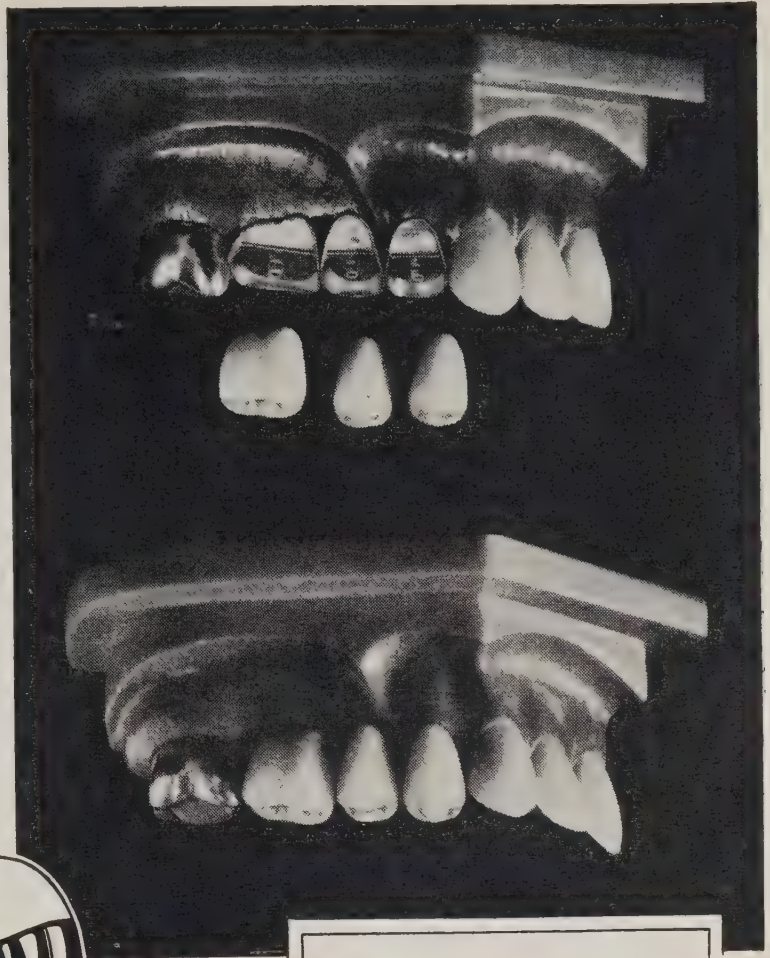
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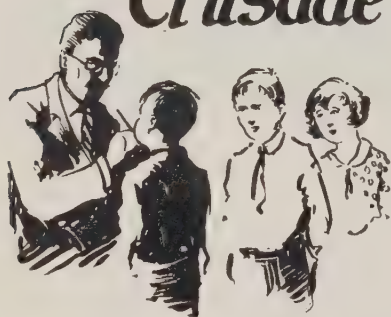


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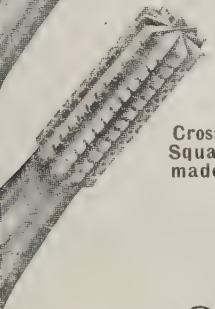
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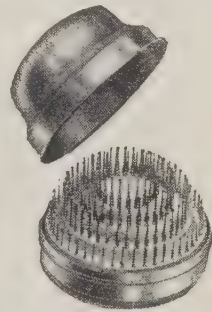


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